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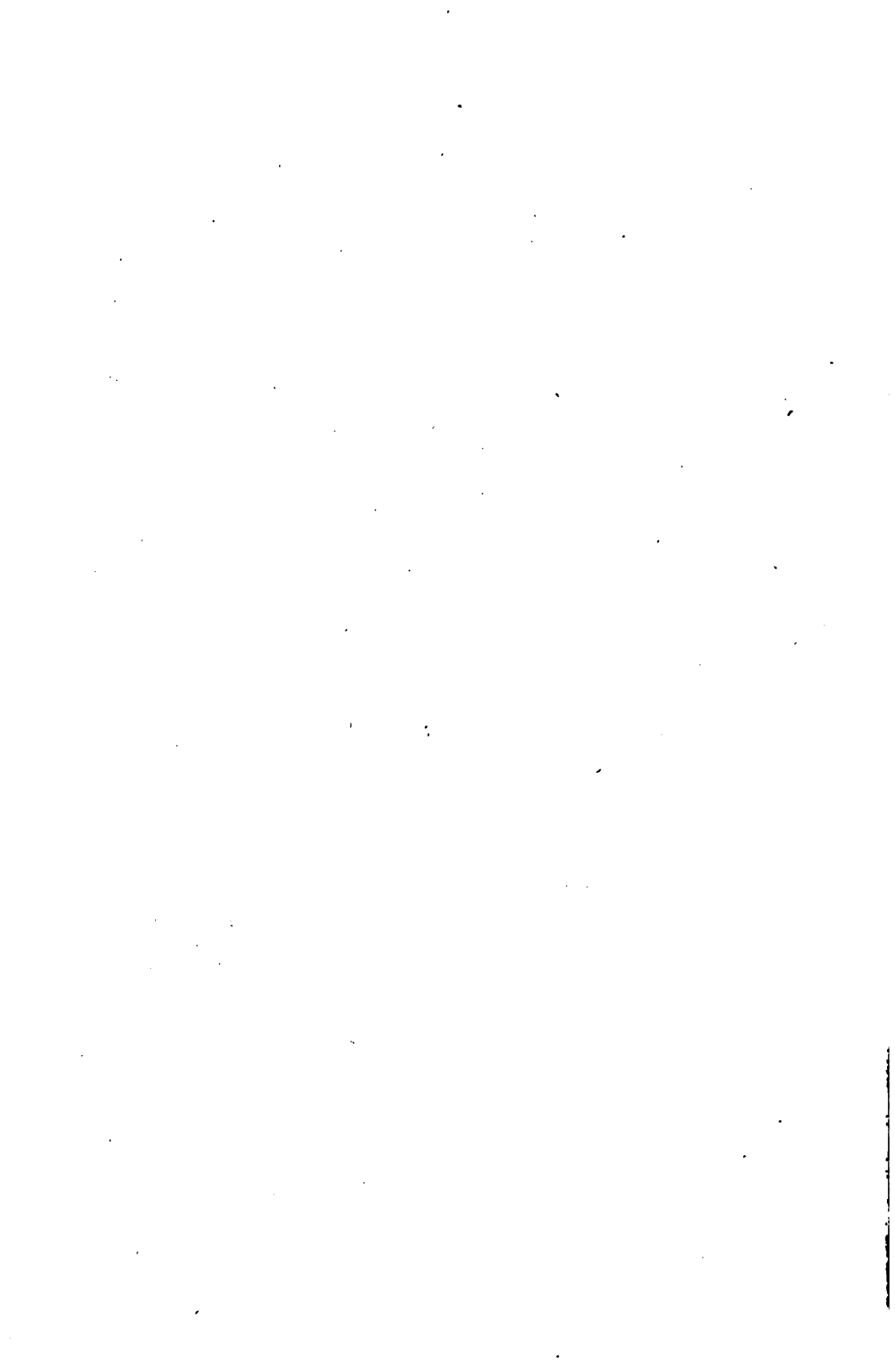
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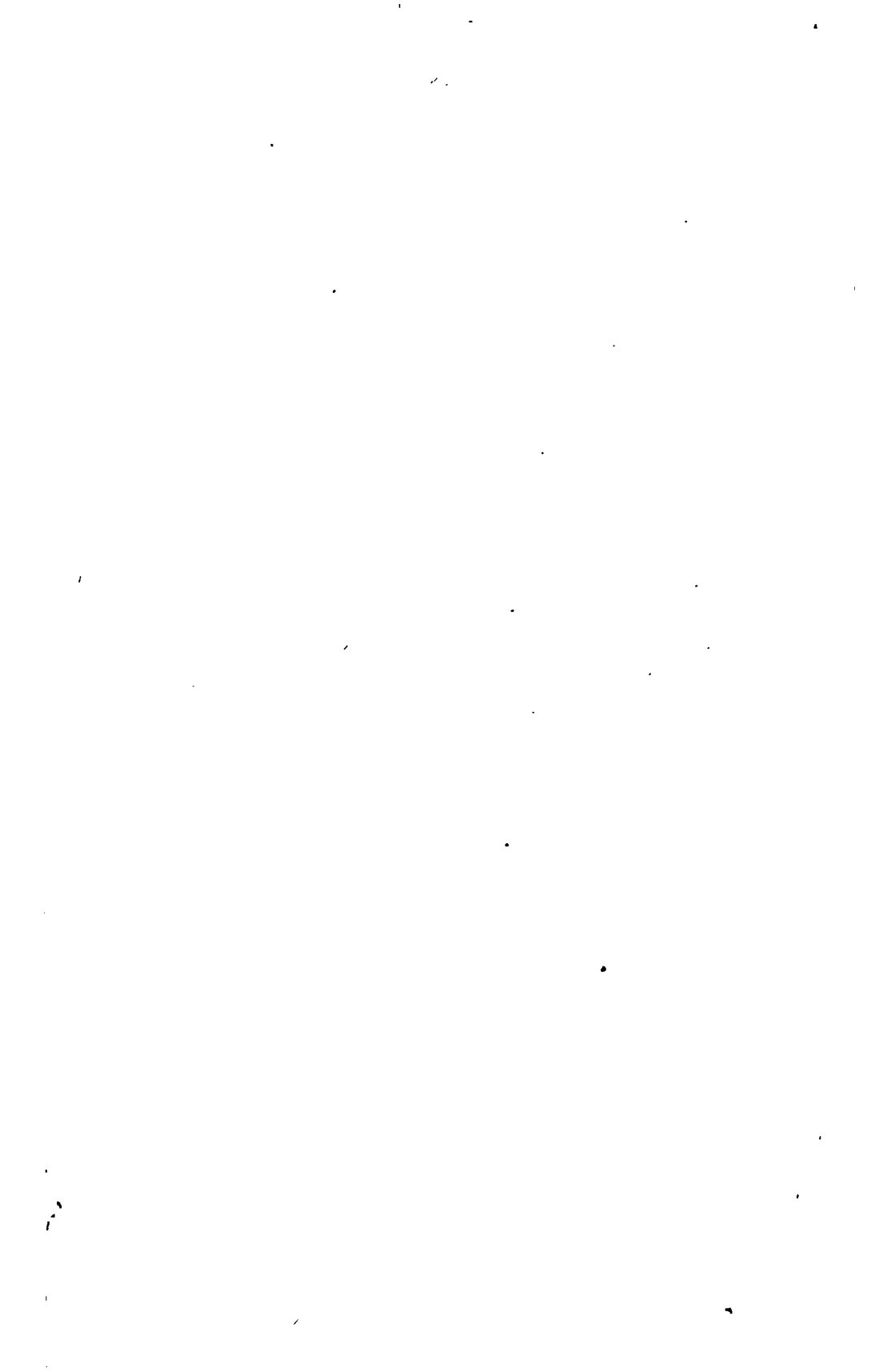
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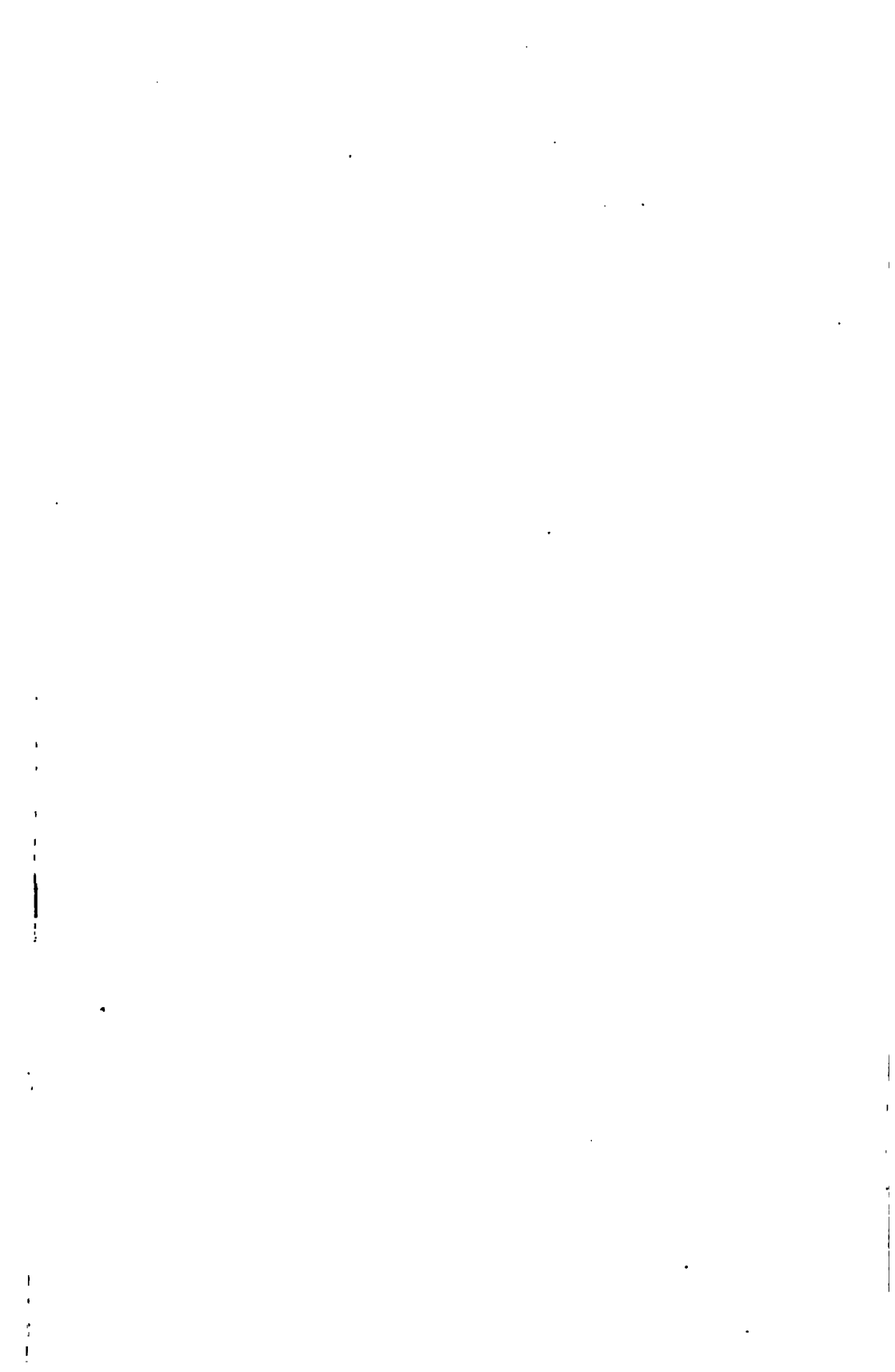
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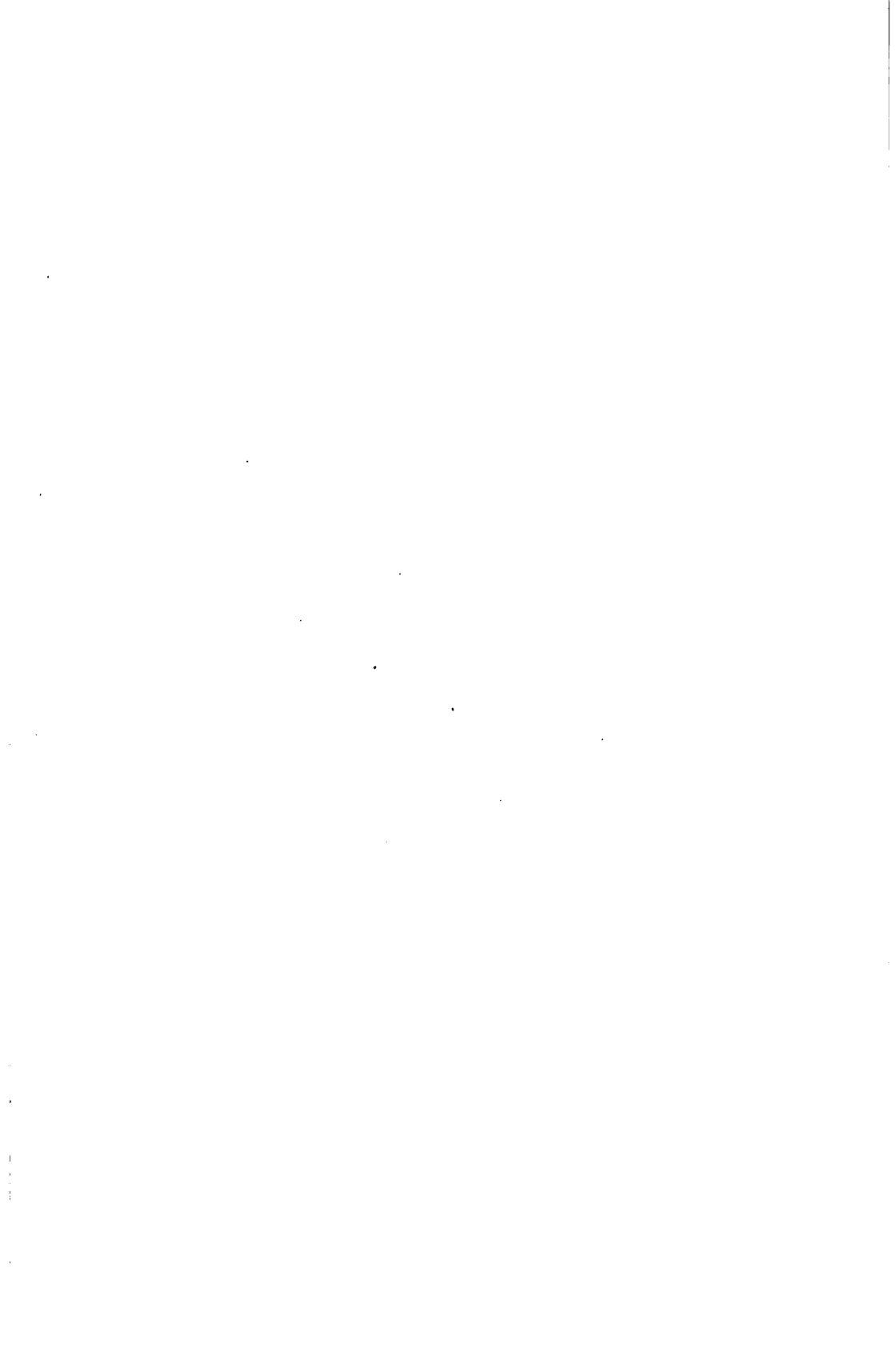
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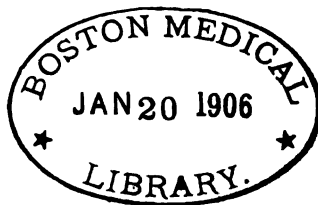
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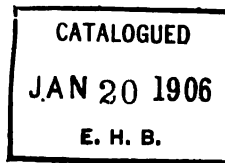
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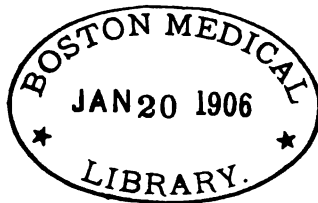




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Dr Stephen Mackenzie's Case of
DERMATITIS HERPETIFORMIS

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THE BRITISH JOURNAL OF DERMATOLOGY.

JANUARY, 1898.

DERMATITIS HERPETIFORMIS.*

BY STEPHEN MACKENZIE, M.D., F.R.C.P.,

Physician to the London Hospital.

THE disease which I propose to discuss is one of the less common diseases of the skin, and though well known to dermatologists by various names, is scarcely known to the profession generally. It is only in recent years, moreover, that it has acquired recognition as a distinct disease, thanks chiefly to the writings of Fox, Duhring, Crocker, Jamieson, Brocq, Unna, and others. As usually happens when the characters of a disease are once fairly grasped, it proves to be less rare than when first delineated and recognized. I have seen some fifteen or twenty cases in the course of the last five or six years. It will be most convenient to describe or define the disease in the first instance, and we shall then be in a better position to decide what should be included under it, for, as will subsequently be seen, there is still some uncertainty with regard to cases which some writers would embrace under the term dermatitis herpetiformis.

I would briefly define it as a cutaneous neurosis characterized by the multiformity of its manifestations, which may consist of erythematous, papular, vesicular, bullous, and urticarial eruptions, which may appear concurrently or consecutively, and are usually attended with pigmentation of the skin; a grouping of vesicles is the most characteristic feature, and present in most cases at some part of their course: it is usually attended with great itching and burning; it runs a chronic course with exacerbations, or relapses and intervals, and usually terminates spontaneously, but may end fatally; it is attended with some, but usually not serious, disturbance of the general

* See illustration on frontispiece.

health ; it affects both sexes, and at all ages, but is most common in the middle period of life ; in women it is often connected with pregnancy, but may occur independently of it.

It is not surprising that such a polymorphic disease should have received a variety of names. What was described by Chaussit and Hardy as *Pemphigus pruriginosus*, and by Willan as *Pompholyx pruriginosus*, is probably this disease. Erasmus Wilson's *Herpes circinatus bullosus* is the same disease : the *Herpes gestationis* of Milton and Bulkley is one variety. Tilbury Fox described it as *Hydroa herpetiforme*, *Hydroa bulleux* or *H. pruriginosum*, and Crocker and Liveing have adopted the term *Hydroa*. We owe the name *Dermatitis herpetiformis* to Duhring ; and whilst personally somewhat indifferent to the choice between this and *Hydroa*, I have adopted *Dermatitis herpetiformis* which seems most generally accepted, and the most descriptive of the proposed names. M. Brocq, who has devoted much study to the disease and its literature, has given the name "*Dermatite polymorphe prurigineuse aigue et chronique*," and more recently he would group the whole class of pruriginous or painful dermatites into the following classes* :—

i. *Dermatites polymorphes douloureuses chroniques à poussées successives*. ii. *Dermatites polymorphes douloureuses subaiguës ou bénignes*, subdivided into two sub-groups, in one (a) characterized by successive attacks separated from one another by intervals of complete quiescence ; the second (b) characterized by a single attack composed of many successive outbreaks, always subintransient, of which the total duration is from a year and a half to five months. iii. *Dermatites polymorphes douloureuses aiguës*, and iv. *Dermatites polymorphes douloureuses recidivantes de la grossesse*—or *Herpes gestationis*.

Duhring's summary of the disease is as follows :—

" 1. The existence of a distinct, well-defined, rare, serious, inflammatory disease of the skin, manifestly of an herpetic nature, characterized by systemic disturbance, a great variety of primary lesions, by some itching and burning, and by a disposition to appear in repeated successive outbreaks.

" 2. That the disease is capable of exhibiting itself in many forms, all having a tendency to run into or to succeed one another irregularly in the natural course of the process.

* " Congrès Intern. de Dermatol." 1890, p. 91.

"3 The principal varieties are the erythematous, papular, vesicular, bullous and pustular, which may occur singly or in various combinations.

"4. That it is a remarkably protean disease.

"5. That the pustular variety is the same manifestation as the disease described by Hebra under the name 'impetigo herpetiformis,' this being the only form hitherto described.

"6. That the several other and equally important forms are worthy of special remark.

"7. That the term 'dermatitis herpetiformis' is sufficiently comprehensive and appropriate to include all varieties of the process.

"8. That it may occur in both sexes, and in women independent of pregnancy.

"9. That it usually pursues a chronic, variable course, often lasting for years, and is exceedingly rebellious to treatment."*

My experience agrees with that of Duhring in all essential particulars save one, and that is the fifth paragraph, the inclusion of the condition described by Hebra as "impetigo herpetiformis." This is an extremely rare disease, of which I have only seen two cases in which I have been led to make the diagnosis, and one of which is now under my care. It nearly always ends fatally, as it did in my first case, and the present one seems likely to follow the same lethal course. Jamieson, after careful consideration, has arrived at the same conclusion as Duhring, viz., that it is simply a pustular variety of D. herpetiformis, but Crocker, like myself, gives it a separate place. Unna† prefers the name Hydroa, and would make four varieties—H. grave, H. benigne, H. gravidarum and H. puerorum. The last-named is described at length as a new variety, and is characterized by beginning in the early years of life, showing less tendency to polymorphism—being mostly papular—and being accompanied by pain rather than itching. Dr. Allan Jamieson points out there are four features characteristic of the disease: "1. The polymorphic nature of the eruption. 2. The paræsthesiæ which accompany it. 3. Its course, in the main chronic, exhibiting a decided

* *Journ. American Med. Assoc.*, Vol. iii. p. 229.

† *American Journ. of Med. Sci.*, 1890, p. 98. Abstract from *Monatshefte für Prakt. Derm.* Bd. ix., No 3.

tendency to relapse or recur. 4. The relatively good state of the general health.”*

Whilst multiformity of lesions is one of the most characteristic phenomena of the disease, frequently one of the anatomical lesions is predominant, though even then it is rarely exclusively present. This predominance of particular lesions has led Duhring to describe several types or varieties, the multiform being in my own experience that most frequently encountered. It must be pointed out, moreover, that whilst one of these varieties may be present at one time, the disease may acquire in later relapses or phases the characters of the other varieties.

CASE 1 (from notes by Dr. Reginald Langdon Down, my house physician). (Exhibited at meeting.)—M. H., aged 40. Her father, now aged 80, suffers from rheumatic gout. He had a skin disease, probably eczema, when 50. One brother has had slight itching of the skin for some years, but it scarcely demands treatment. No arthritis in any member of family except father. The patient has always had good health with the exception of the present skin affection. She has four living children. Two miscarriages preceded the last confinement, which occurred about a year and a half ago. The eldest child, ten years old, has scurfy patches on the thighs and legs. The rest are stated to be healthy. The menstrual periods have occurred regularly with the exception of pregnancies, and two years ago, when they were absent for six months.

Her present illness began two years ago last summer, before her last pregnancy. It began with irritation of the skin, affecting the right arm, the waist, legs and the front of the feet, more especially in the evening. She is quite sure the irritation preceded the pregnancy by a few months. During the period of pregnancy the irritation caused her to scratch the skin, with the result that pink pimples appeared under (or in) the skin, to be followed by pustules and scabs. Blisters did not appear till ten days after the birth of her child (27th April, 1891). By this time there were sore places over all parts of the body. Since then the disease has been general and continuous, with the exception of a period of improvement while under the treatment of Dr. Russell, of Guildford. After the treatment had been discontinued for a month or two the disease reappeared in its previous form. She came under the care of Mr. Jonathan Hutchinson, jun., three months ago, who admitted her to the London Hospital and transferred her to my care.

Present condition, November 1892. The skin presents a mottled appearance, from dirty grey pigmentation with small white rounded spots suggesting atrophy of the skin or superficial scarring. Apparently the pigment occurs in the site of healed sores. The eruption itself presents many forms, erythematous patches, papules, pustules, vesicles and bullæ, and the resulting scabs. These are irregularly scattered all over the body, but leave a considerable part of the surface free. The bullæ form the most prominent feature. They appear to form by the coalescence of vesicles which spring up near to each other on a red base. In order

* “Diseases of the Skin,” 2nd Ed. p. 162.

to obtain relief from the irritation these cause, the patient pricks them and discharges the serum as soon as it collects. Numerous patches which have been bullæ of the size of a shilling or larger are to be seen. The scalp is much affected. No factitious urticaria. The tongue is coated, and the breath offensive; the buccal mucous membrane is free from eruption. The temperature has been irregularly raised, reaching at times to 102° F. and 104° F., but has lately fallen to the normal. No sign of visceral disease; no albuminuria. The parts now most affected are the neck, posterior part of scalp, trunk front and back, legs and thighs. The hands and forearms are practically free. The soles were at one time covered with bullæ, but are now free. In parts small vesicles are seen without any red base; in others vesicles spring up at the borders of a red patch.*

One of the best-marked cases, illustrating the various phases through which the disease may pass, is the following, which I watched for five-and-a-half years:—

CASE 2.—The patient, T. C., aged 37, a blacksmith, after libations, not wise but deep, on Boxing-day (December 26, 1885), slept in a damp bed. A few days later he had a cold in the head, lost his voice, and his throat was painful. This was immediately followed by small blisters on the inside and outside of his mouth, which rapidly spread to his chin and other parts of his face. He came under my observation on January 6th, 1886, within a few days of the onset of the disease. The skin of his face was red, and vesicles were scattered over the whole of the face and ears, and behind the ears. On the face itself the skin was so generally affected that scarcely any healthy skin was visible. The vesicles were all small, none much larger than a millet-seed; some were yellow, some yellowish red, all translucent, and seated on a slightly congested base. Some dried crusts of previous vesicles were also present. On the neck, front and back, were a number of vesicles and crusts. The vesicles were here larger—some as large as a pea and more discrete, healthy skin intervening. On the front of his chest and insides of arms, especially about the bend of the elbows, there was erythema and vesicles. The erythema was ringed with a well-defined margin; the rings were small, often intersecting. In some of the rings vesicles occurred, but vesicles were also present in parts which were not erythematous. On the back were scattered papulo-vesicles. On the backs of the arms and elbows were bullæ, some suppurating. The penis and scrotum were thickly covered with grouped vesicles and bullæ. On the inside of the thighs and knees were papules and papulo-vesicles, and on the right foot a bulla as large as a threepenny-piece. There were a number of vesicles on the inside of the lips and cheeks, and on the dorsum of the tongue. He was a well-made, muscular man, of healthy appearance. From this time he was never free from his disease. It spread in various forms all over his body, so that not an inch remained unaffected. It underwent various phases. Throughout his disease vesicles and bullæ continued to make their appearance, and almost to the last the mucous membrane of the mouth was affected. He had frequent attacks of circinate erythema on the trunk and extremities. At one time the greater part of his body was covered by soft, flat and rather large scales, which gave rise to an appearance not unlike psoriasis. The "scales," however, were really flattened bullæ, such as occur in

* The eruption has entirely subsided since the patient was exhibited, under treatment of an ointment of sulph. precip. 3ss. to ung. zinci. 3i.

pemphigus foliaceus. At this time he fell into a marasmic condition, which occasioned grave anxiety, but from which he recovered. At a later period he had a certain amount of urticaria, spontaneous and factitious. His skin became deeply pigmented, and amidst the pigment were numerous small white atrophic spots and superficial scars. This skin was exquisitely vulnerable, so that the least mechanical injury, such as a knock, or the handling of his tools, would bring out a bulla, as is seen in pemphigus. His disease followed exposure to cold, and throughout he was remarkably influenced by it. An accidental exposure to cold would aggravate the disease and bring out a crop of vesicles or bullæ. The patient was admitted for the last time as an in-patient on March 6, 1891. He had been in the hospital a year before with his usual cutaneous symptoms, but complaining much of weakness. He was somewhat wasted, but presented no signs of organic disease elsewhere than in the skin. He stayed from February 20 to March 8, and the nursing, rest and quiet did him good. He had not been feeling well ever since, but was attending in the Skin Department. About six weeks before his last admission he began to complain of pain in the epigastrium and left hypochondrium, increased by food, solid and liquid. When admitted his face was pinched and pale, with a despondent expression. The abdomen not distended, but tender on pressure, especially at the pit of stomach and left hypochondrium. He had anorexia, flatulence and diarrhœa. No signs in other parts of body. His temperature was 101° F. His skin was free from eruption, but looked thin and tender; no loss of sensibility of skin and no irritation; blood, $\frac{H. 53}{C. 64}$ W. 1-2, one white to 800 red. The abdomen later became distended, was very tender, and he had griping pains and diarrhœa. He had a remittent pyrexia, and rapidly lost flesh. No signs developed in the lungs. He had one attack of diffused but fugacious erythema, and a few pin-point vesicles on April 25. He left the hospital on May 18, and died at home a few days later. No post-mortem examination could be obtained.

I concluded that his death was due to peritonitis, probably tubercular, but from Dr. Pringle finding numerous ulcers of the intestine in a fatal case of the disease beginning as herpes gestationis, it may have been non-tubercular.

Throughout his long illness of five-and-a-half years he had no itching, except when he had urticarial phenomena, and then they were only trifling. His skin, however, was tender from the crusts which sometimes formed. It should be added that he had had what appeared to be a soft sore on the penis when 18 years old, with a suppurating bubo, but no rash or sore-throat. His wife had two miscarriages, followed by a stillborn child, and later by a healthy child.

A good example of the vesicular variety is the following:—

CASE 8.—R. G., aged 40, carpenter, who came under my observation in 1889, and for the notes of whose case I am indebted to Dr. Galloway. There was no history of syphilis, and no antecedent illness, except that between the ages of 16 and 18 he suffered from attacks of what appear to have been aurial vertigo. His skin disease commenced three months before I saw him, with what, from his description, seemed to have been an erythema on the front of the chest, and which lasted about five weeks. At the end of that time he got chilled, after being heated at work, and this was followed by the rapid development of "blisters" all over the body. These blisters were not preceded by any redness, such as previously occurred on the chest. In June his neck was exposed to the sun when at work,

and this was followed by redness and roughening of the exposed skin, and on this site in a short time appeared an eruption of blisters similar to those on the trunk. Whilst the eruption was appearing the skin itched intensely, so as to prevent his sleeping at night, but he said "when water appeared in the blisters" the itching ceased. When I first saw the patient there was an eruption of vesicles, mainly on the trunk. On the trunk it had a symmetrical arrangement, the principal foci being both mammary regions, both scapular regions, both shoulders, and both lumbar regions near the spine. The rest of the trunk had vesicles scattered more sparsely about it. A few vesicles were also seen over the extremities, and there was the mark of one on the glans penis. The conjunctival and buccal mucous membranes were not affected. The eruption consisted originally of single vesicles of medium size which, frequently coalescing, formed large irregular multilocular vesicles. There was very little hyperæmia or thickening of the surrounding skin. The vesicles had mostly a lilac tint. The itching was very severe. Whilst under observation many vesicles, mostly grouped, made their appearance; a few bullæ formed, some of which had hæmorrhagic contents. At another time the eruption was mainly papular, with a few pustules, the latter chiefly on the nates and thighs, at the mouth of hair-follicles. The treatment pursued was a nightly dose of chloral or cannabis indica, and soothing local applications. Later arsenic and quinine were tried. The latter seemed to exercise the greatest influence. The pruritus gradually diminished and, in its wake, the eruption. The attack lasted about twelve months, and when he ceased attendance (20th June, 1890) he had had no spots for two months. His skin was occasionally irritable. Felt quite well. 8rd November, 1892. He reported himself to-day at my request. He has had slight attacks of papules and vesicles ever since discharged, and on one or two occasions since, attacks of bullæ. His skin is always more or less irritable. He says he has a small red rash, which, when rubbed, causes "small white bumps, which have no water in them" (urticarial papules). He draws attention to some white atrophic-looking patches, from the size of a pea to double that size, scattered over thorax and upper extremities. There is no pigmentation. Besides the atrophic spots, he has a few papules on his back, some with their heads scratched off, and on the thighs, at side and back especially, some keratosis pilaris. He also remarked that his complaint was aggravated when he worked for any length of time on oak, which "gives off a sour odour." When changed to work on other woods improvement has always followed. He has twice been sufficiently bad to think he must attend again in the Skin Department, but the attacks have subsided.

CASE 4.—A very severe case of vesicular form was a lady—an old patient of mine—I saw with Dr. Holberton of Hampton. In this case the patient, 44 years of age, became rapidly affected with a general vesicular eruption of the most characteristic form, viz., vesicles of medium size, about that of a lentil, with a corymbose arrangement, associated with a certain but not great amount of hyperæmia. It was accompanied by very great burning and itching, some fever and constitutional disturbance, and sleeplessness. It very gradually lost its acute phase, but vesicles and bullæ continued to come out occasionally for more than a year. In its later stages it was decidedly urticarial, papules and wheals being produced by scratching, and sometimes occurring spontaneously. The patient derived great benefit, under Dr. Oliver's care, at Harrogate, from the baths and waters, and the urticaria was controlled, in a great measure, by antipyrin. The lady was of a nervous temperament, with gouty tendencies. She had an attack

of pain and tenderness in the right wrist in February 1889. Her only child *was* then about fifteen years old, and there was no irregularity of the menses.

I will now pass on to speak of the disease as occurring in connection with pregnancy and parturition—the Herpes gestationis of some writers. The most typical case of this form that I have observed is the following (*see illustration on frontispiece*):—

CASE 5.—S. P., aged 32, came under my care at the London Hospital on 12th August, 1880. She had had no previous skin disease. She had been married fourteen years, had had two children, no miscarriage, and was then five and a half months pregnant. She was always strong and well, and had no disease until three years after the birth of her first child, when, being five months pregnant, an eruption appeared in the skin similar to that she had when she came under my observation. She received a great deal of treatment for it, but it did not even improve until after her confinement at full term, when it disappeared in about two months. From that time up to the present attack she had no return of it, and had been in perfect health. She had never had syphilis. Seven weeks before coming under my care she first noticed an eruption upon the feet, then upon the hands, and it gradually extended over the legs, abdomen, chest, and, to a less extent, upon the back. At first it came as small brown (red?) patches, darker at their circumference than in the centre, and slightly raised at the edge, not at all scaly. After a short time these patches became covered with vesicles filled with clear fluid which would either burst and form a scab, and then the scab would fall off or refill. Between the blisters the skin felt irregular, with small subcutaneous lumps like shot, some of which became blisters, whilst others disappeared spontaneously. She was treated with sulphur baths, blue ointment and lotions, but did not improve. For the last fortnight the contents of the blisters became purulent, and formed thick yellowish-brown scabs. She was tormented with itching and burning, and could get no sleep. She was of very dark complexion, well nourished, and her general health was good. The entire circumference of her arms presented an erythema, which terminated above by an irregular but well-defined margin; the edge was slightly raised, scaly, and brighter in colour than the centre, which was dark yellowish. The flexor surface at the elbow was free. On the forearm the eruption was more scattered, the edge more raised, and among the patches were vesicles and crusts. The nails were cracked and dry. On the left side of the thorax were two ring-shaped patches with raised edges and scaly margins, and on the abdomen also ring-shaped patches, with slightly raised and scaly edges, and yellowish, blue, or greenish centres. There were large patches of exudative erythema upon the thighs, and scattered over the surface of these patches dried up circumscribed scaly masses. There was considerable œdema of the legs. No albuminuria. No eruption on the palms and soles. Some vesicles on the chin. No enlargement of lymphatic glands. The skin was moist, and very irritable. Temp. 98·9°F., P. 138. She was ordered bromide of potassium, and a lead and glycerine lotion. On 20th August it is noted the feet and legs are greatly swollen, and the skin red, tense and shining. Upon the dorsum of feet are a great number of bullæ, varying in size from a millet-seed to a sixpence: contents generally clear, a few sero-purulent. On the arms are papulo-vesicles and a few bullæ. Her sleep had been much interfered with, but opium had secured some rest.

In spite of treatment of various kinds, the eruption gradually spread over nearly the entire body, exempting only the palms and soles, erythema marginatum, papules, papulo-vesicles, pustules and bullæ, all coming out in succeeding crops, whilst she was incessantly tormented by itching and burning. The latter affected also the palms and soles, but no eruption occurred in those parts. The nails of the hands and feet became discoloured, dry and cracked, with a tendency to separation. So things went on till November 8th, when she was delivered of a well-developed child, free from any affection of the skin. On November 12th some abatement of the itching of the skin took place. The existing eruption for the most part began to fade, but vesicles and bullæ continued to make their appearance, and the skin was deeply pigmented. The improvement once commenced gradually continued, and by November 29th (three weeks after parturition) all eruption had disappeared, and the skin was free from irritation. She was discharged on 7th December with the skin in a natural condition, except for slight pigmentation on the chest and legs.

The patient was readmitted on 10th March, 1881, with a third attack of the disease. She was nursing her baby; had not menstruated since her confinement, but was sure (as turned out to be accurate) that she was not pregnant. The first signs of eruption occurred three days before readmission, but were preceded by rheumatic-like pains in the limbs for three days. The eruption began as little white blisters upon the hands and feet, which condition soon extended to the arms, legs and face, but the trunk had not then been affected. There was very great itching. She was well nourished but felt weak; her temperature was 100·6° F.; her appetite was poor, and she complained of great weakness. The eruption, on the second occasion of observation (third attack), presented much the same general characters as on the previous one, being markedly polymorphic, with pustules, papules and marginated erythema, besides many vesicles, grouped-like herpes, and bullæ, some of the latter of considerable size. The skin was deeply pigmented, and very irritable. She was ordered a lotion of glycerole of lead, and given 5-minim doses of arseniate of soda solution three times a day. Rapid improvement took place, and the patient was discharged free from any irruption or irritation of the skin on 22nd April, so that this recurrence only lasted a little over six weeks.

CASE 6.—A case following soon after parturition is Mary R., aged 35, who came under the care of my colleague, Mr. John Couper, in May 1887, and later, under my observation. The following notes are by Mr. Smythe. She was confined of a full-term child, but still-born, in January. About three weeks later she had burning pains in the face and hands, which were followed by an eruption of bullæ. The smaller bullæ had contained clear fluid, the larger a bad-smelling creamy material. The patient had two living children, but since then four were born dead. She had a fall before her last confinement. There was no history of syphilis or skin disease. The patient's mother suffered from gout, and also one of her brothers. On admission, bullæ of various sizes were situated on the face, left leg, both feet, under the arms, and on the arms. The palms of the hands were affected, but bullæ did not form there, the epidermis coming off in scales, leaving a delicately reddened surface. Around the bullæ the skin was red, but there was no induration. On the feet were some small red spots, the colour of which disappeared on pressure (papules). There was no discolouration of the skin in the site of former bullæ. A week after the patient came under my care she complained of pain and swelling of the right foot. The skin was red and very tender. Some lead lotion was applied. The next day the skin was not so tender,

but was still red. There was a lump over the metacarpo-phalangeal articulation of the great toe, and there was doubtful evidence of effusion into the ankle joint. The temperature, which had hitherto been raised, at this point fell and became subnormal. The patient improved a good deal under arsenic internally and ichthyol locally. She remained under treatment from June, 1887, to January 1888. The patient came under treatment again in April 4, 1889, with a recrudescence. She was treated with ichthyol internally, and later with bromide of potassium and various local remedies, chiefly a lotion of carbolic acid, and an ointment of nitrate of mercury diluted. She improved and ceased to attend on May 16, 1889. The association with gout in this case is interesting with regard to its etiology. I have already mentioned a case (4) in which also the patient was gouty.

CASE 7.—I have at the present time a gentleman aged 68 under my care. He has had, at long intervals, three attacks of gout in the great toe; has had renal calculus, and has at the present time, and for some years back, patches of gouty eczema. On September 24 of the present year he came with some patches of erythema on his face and scalp. A few days later clustered vesicles formed on each of these patches, some of which became necrotic, and loss of substance, with slight scars, has resulted. He also had a few papulo-vesicles on the neck and trunk, but has so far had no further outburst. Mr. Malcolm Morris, who saw the patient with me, agreed in regarding it as an instance of dermatitis herpetiformis, but there has been no pruritus or burning.

The following is a good example of the disease :—

CASE 8.—John L., aged 41, a labourer, came under my care in the Skin Department in 1886, complaining of an eruption and intense pruritus. For the notes, I am indebted to Dr. Sydney Hodges. His complaint commenced about 15 months previously, between his shoulders, and he thought it was due to dirt causing irritation. On taking off his shirt, he observed some little red spots which developed into little blisters. The eruption rapidly spread all over him. It always commenced in the same way, as small clear blisters. The biggest he has noticed have been about the size of a pea. They generally burst when he is turning about in bed, and some gummy fluid exudes, which stiffens a linen rag. The vesicles which do not burst seem to become more muddy.

Condition on March 4, 1886.—Skin much altered by scratching, the marks of which are abundant. Small vesicles, aggregated in little clusters, are noticed here and there. Some of the vesicles have become pustular, and some pitted scars, and many pigmented spots and scars, the more recent ones being not unlike an ordinary boil, scattered over body; no crusts anywhere. The eruption on the scalp consists of red isolated spots; no seborrhœa or crusts. The eruption is universal, with the exception of the palms and soles. The skin is extremely irritable in spite of treatment. Internally, chloral at night, and cannabis indica in the daytime, were given, and locally an ointment of oleate of zinc, and lotions of carbolic acid and liquor carbonis detergens were employed. He benefited from these, but I have no note of the final state of the patient.

CASE 9.—The next case I will narrate is that of a woman, aged 35, under my care in the Skin Department in 1887, for the notes of whose case I am indebted to Mr. J. Cavendish Molson. The family history is unimportant, except that her mother, who died at 74, had "rheumatic gout." The patient had had one attack of what she called rheumatic gout, but as it only affected the left great toe it may be fairly

concluded it was really podagra. When pregnant with her first child, an eruption like boils appeared on the back of her neck, and was accompanied by sore throat. She had an attack of bronchitis and hæmoptysis 16 months before coming under observation. She had had six children, the first two of which only were living. She fell down stairs a fortnight before her last confinement, and the child was still-born. Menstruation regular. In February of 1887 she went to be churched, and wore a pair of new boots on the occasion. She thinks they may have chafed the skin, for on the following day she noticed a small blister about the size of a shilling on the outer aspect of the right heel. This she poulticed, but it continued to get worse, and at the same time a large blister appeared on the palmar surface of the right middle finger, reaching from the tip of the finger to the centre of the first phalanx. A few days later white bladders, varying in size from an egg to a split pea, appeared on all parts of the body, with the exception of the legs below the knee. There was great itching all over the body, and burning of the feet. An enormous bulla developed on the back of the right hand. The appearance of fresh bullæ was ushered in by "cold shivers," and the eruption in successive attacks was generally at its height prior to the onset of each menstruation. From the time of their first appearance until coming under observation, the bullæ had reappeared and disappeared, but had become smaller, and she stated the blisters had become less white than they used to be, and had assumed a redder appearance. The patient stated that the bullæ are preceded by a patch of redness (erythema), which afterwards changed to a reddish-yellow blister, which later exuded a watery fluid. A scab then formed, which remained for about a week and then fell off, leaving a shiny white scar. When she came under observation she had patches of erythema, vesicles and bullæ on the face, anterior and posterior aspects of the thorax, above the mammary line, the arms and forearms, front and back, the eruption being most marked on the upper extremities. The patient was in fair general health, but complained of a loose cough and loss of appetite with constipation. There were no signs in the lungs. She was treated with saline aperients and soothing lotions, and improved, but I have not been able to trace the sequel to the case.

Another case of the disease, possibly in some connection with pregnancy, is the following, very briefly described :—

CASE 10.—Dinah S., aged 28, admitted under my care into the London Hospital 1st August, 1889. She had been married four years. She had borne a child, then three and a half years old, and healthy; had a miscarriage about a year and a half later, and gave birth to a child nine months before coming under observation. The last child died when three months old from an eruption said to be like the mother's. Her husband was stated to be well and free from all skin disease. The patient's account was as follows :—Six weeks after marriage a few pimples came out on her thighs with white blisters resembling flea-bites. These had a black speck on the crown, and then gathered and formed a scab. It quickly spread to all parts of the body except the face. It has come and gone ever since, sometimes disappearing for as long as three or four months. She never complained of sore-throat until three weeks before admission. The patient was rather anxious. The legs and hands were thickly covered with papulo-vesicles and papulo-pustules, and there were scales and scars where the eruption had been on the abdomen and chest. The papules or papulo-vesicles were small and presented a slight ring of

inflammation surrounding the raised part, which bore a small scab in the centre. The thighs were most thickly covered. There was great itching of the skin, especially in the thighs, where the disease was most severe. She had a sloughing ulcer on the right side of the throat which was judged to be syphilitic. The eruption gradually but completely disappeared by 20th September, but the throat only very slowly recovered. She remained under my care in the Skin Department for 18 months or two years. She had many relapses, with various phases, in many of which the vesicular corymbose character was present, and all were attended with extreme pruritus. On one occasion she brought her infant, 14 days old. She stated that when it was washed at birth nothing unnatural was noticed in the skin. The next day red pimples were observed on the back, which became blisters. Since then it had had a succession of blisters on the back and arms. These were grouped beside on back and arms: some red spots about anus, and thrush of the mouth. The child was not cachectic. Arsenic appeared to do the mother good. The question of syphilis in this case introduces a complicating element. The duration of the disease, its varying phases, and the extreme pruritus were quite unlike an herpetiform syphilide: nor was the condition of the baby at all like the hereditary pemphigoid eruption met with in infants. Opinions may differ whether this case is a true example of herpetiform dermatitis. I think it was such, complicated by syphilis. If it were really syphilitic the importance of the case would probably be even greater, as it would be an example of the most successful syphilitic plagiarism of dermatitis herpetiformis, and might help us in the elucidation of its pathology.

In the following case I saw the patient in three distinct attacks:—

CASE 11.—George R. W., aged 18. His first attack was two years before, when he became my patient for a bullous eruption, chiefly on the thorax, but he had a few spots on his legs and face. He remained under treatment for seven weeks, by which time the disease had entirely subsided. He remained entirely free from the disease till the following Easter, when it returned, and he remained under treatment for four months. At the end of that time it had entirely disappeared, and he remained free from any eruption until the present time. About three weeks before the 25th April, 1889, he noted some red spots on each side of the chest, over the sixth rib. They were very irritable. They later became blisters, which contained a clear fluid. Next some fresh spots of a similar character appeared on each side of the chest, in the pectoral region, next on the back, and a few on the anterior aspect of both arms. The face and legs had remained free. He had been healthy all his life, and his general health was then good. He denied syphilis. He had one brother and two sisters free from any skin disease. The note in my case-book, 25th April, 1889, states the eruption is fairly symmetrical. It consists of a number of circular patches of bullæ on inflamed bases. Some patches are larger than others. Where the bullæ have disappeared there are left yellowish patches, and over some parts are blood crusts and coagulated serum. The eruption is well marked over the pectoral muscles and at the sides of the thorax, reaching as far up as the axilla. *Some patches appear to follow the course of the ribs.* The face and legs are free. He was treated with quinine and iron and cathartics. Locally, at first, with glycerine of lead ointment. Sulphur ointment was tried for a fortnight, and later a compound sulphur ointment, with sulphur, carbolic acid, and nitrate of mercury. He remained

under treatment for 14 months and greatly improved, but I have not seen him since.

This case is interesting, not only on account of the complete intermissions between the three attacks, but on account of the zonular character of the initial eruption in the third attack, and which was faintly discernible at a later stage.

The following and last case is from notes by Dr. Frank Corner, and was under my care in the Skin Department, London Hospital :—

CASE 12.—Isaac C., aged 44. The patient was a Hebrew of Spanish extraction. He was a tailor's cutter, and his work involved standing all day (10 hours). He was a married man with eleven children, nine of whom were living. One child died of meningitis, the other of inflammation of the bowels. The patient denied having had syphilis, or any previous disease of the skin. The disease commenced five weeks before my seeing him. The eruption first showed itself on the dorsum of each foot, and spread gradually up the legs, and was still increasing and appearing in distinct parts. The patient complained of itching and tingling in the evenings, but this was most severe after he had been some time in bed. The patient, when I first saw him, in May, 1888, was suffering from a bullous eruption over both legs, loins and abdomen. It was most marked on the legs, where distinct bullæ occurred in all stages—clear, pustular, and scabbing. On the legs the eruption was diffused over both flexor and extensor surfaces, the popliteal space, however, on both sides being free. There was no eruption between the fingers or toes. There were a few scabs on the genitalia, and pustules on the elbows, the flexor surface of arms being completely free. The face, neck, and scapular region were free. A subsequent note records outbreaks of bullæ, papules, vesicles and pustules, with great itching. He was treated with *Tr. belladonna* in 10-minim doses three times a day, and a lead and glycerine lotion. Later *cannabis indica* was given, and then quinine and iron. He continued under treatment until August. He reported himself to-day, 3rd November, 1892, at my request. He stated he found himself getting better, so left off attending at the hospital. The disease, however, was not cured. Of his own initiative he got some sulphur and lard and mixed them together, and rubbed this well into the affected parts night and morning, and about a fortnight after using the sulphur it all disappeared. This is about three and a half years ago, and he has had no recurrence. His general health is good. I examined his skin; it was free from any disease, save a few spots of folliculitis and marks of flea-bites.

The cases I have narrated and alluded to, I think, illustrate nearly all the features of the disease as I have defined it, bringing out its polymorphic character, chronicity, and relapsing course. Of the varieties, the vesicular and bullous have been in my experience the most common, and in nearly all there has been at some time more or less grouping of vesicles on the herpetic pattern. In some cases the disease has predominated on the trunk, in others on the extremities, and in some it has been universal, as in Case 2. The palms and soles

are usually, but not invariably, exempt. In all cases save two (Cases 2 and 7) burning and itching of the skin have been amongst the most prominent features of the disease, and in some cases the abnormal sensations have preceded, even for a considerable time, the appearance of the eruption. Burning and itching, moreover, sometimes occur in parts where there is no eruption. In Case 2, as already stated, itching and nearly all paræsthesiæ were practically absent throughout its long and severe course. The patient was exhibited at several meetings of the Dermatological Society, the correctness of the diagnosis was admitted, whilst all familiar with the disease were surprised at the entire absence of pruritus. The itching is generally worse when the patient is warm, and thus, partly on this account, and partly from the absence of distraction of the attention, especially troublesome at night, in many cases preventing sleep. The absence of itching in Case 2 and in Case 7 may have some bearing in the localization of the lesion in the nervous system. The disease nearly always ends in recovery, but its course is often extremely protracted, and when apparent recovery takes place the possibility, or even probability, of recurrences must be borne in mind. Stellwagon* has recorded a case which had lasted eight years. Duhring has recorded a case which persisted for upwards of twelve years. Case 1 lasted five and a half years without any intermission, and ended fatally. M. Brocq† has also recorded a fatal case. His patient was 86 years of age, and he naturally attributes the fatal termination to this fact. It is difficult in both hospital and private practice to follow up the cases, as the patients are not unnaturally prone to seek fresh advice and try new treatment, when, as usually happens, that pursued by one medical attendant fails. The disturbance to the general health varies a good deal, but bears more relationship to the severity than the duration of the disease. Some patients preserve their health in an unexpected manner.

The variability of its course is as characteristic as the multiformity of its manifestations. There is a convenience, therefore, in Brocq's classification of cases mainly as to their course. It better enables us to forecast the future. It occurs in both sexes, and in my experience about equally so. It happens that in the twelve cases I now record there are six of each sex. The cases are not selected, but simply

* *Journal of Cutan. and Genito-Urin. Disease*, February, 1890. † *Op. cit.*

those which came most readily to hand. As regards age, it is most common in middle life, nine of the twelve cases now recorded being in fourth and fifth decennia. They occur, however, at any age, in childhood, and in old age. When it occurs in women it may be associated with pregnancy, but the symptoms may date from, or even precede, conception. Most usually, I think, it occurs in the later months of pregnancy.* Some women have it with each succeeding pregnancy; in some it occurs in some pregnancies, but not in all succeeding ones; and in some in which it is started by pregnancy it may subsequently occur, as in Case 5, independently of it. In some cases it makes its appearance only after parturition, though in some of these cases paræsthesiæ have been present throughout the pregnancy. A good example of this has been recorded by Dr. Liveing.† The disease, however, occurs in women independently of pregnancy.

I come now to its diagnosis; this is comparatively easy in a characteristic and fully developed case, but offers difficulties chiefly at its commencement. It may be impossible in cases in which it begins as an erythematous eruption before vesicles or bullæ appear. When these concur it may be a question whether the disease is a vesicating or bullous erythema, or *D. herpetiformis*. The great and often precedent itching will sometimes usefully guide us: in erythema bullosum the bullæ are usually not a prominent feature of the eruption, and there are patches of erythema without bullæ, whilst in *D. herpetiformis* *usually* bullæ also occur in parts independently of erythema. The disease with which it is most usually confounded, however, is pemphigus, from which it is distinguished by the great itching and burning in nearly all cases, by the fact that besides bullæ other lesions are usually present; that is, it is polymorphic whilst pemphigus is a monomorphic disease; and its bullæ are more uniform and usually larger. Whilst separating *D. herpetiformis* from pemphigus I fully recognize the relationship between them, as has been done by Crocker (Congrès Intern. de Derm., 1889). We are here not so much tracing relationship as separating a clinical type. From pemphigus pruriginosus it may be difficult to discriminate, and indeed most writers regard the latter as one variety of the disease.

* Willan, "On Cutaneous Diseases," 1808, vol. i. p. 551, alludes to a case recorded by Dr. Upton in "Memoirs of Medical Society of London," vol. iii.

† *Lancet*, June 1878.

Pemphigus foliaceus is a rare disease, and it would not be necessary to particularize the differences, but that in Case 1 it resembled this condition at one time. In *P. foliaceus* the lesion is one throughout, in *D. herpetiformis* it is manifold. The beneficial effects of sulphur may suggest scabies to the reader, but the disease would not be confounded by any one familiar with the disease. There are some other diseases of the skin from which the differential diagnosis has been given by some writers, but I have not seen the mistake made. Dr. Jamieson would include under dermatitis herpetiformis cases which resemble Bazin's hydroa vacciniforme, which Mr. Hutchinson has described as "Summer Eruption," and which both regard as allied to *Xeroderma vel atrophoderma pigmentosum*, or, as Mr. Hutchinson calls it, Kaposi's disease. Brocq has recorded (in *Congrès Intern. de Derm. et de Syphilographie*, Paris, 1889) a case communicated to him by M. Gémy which appears to form a connecting link between these cases and *D. herpetiformis*, but it appears to me desirable to keep, at least provisionally, these cases distinct.

I must very briefly discuss the pathology of the disease, which, in my definition, I called a cutaneous neurosis. It is, I must admit, much easier to use this expression than to explain it. I use the term in its widest sense, to include both organic and functional affections of the nervous system. I do not know of any direct facts as to change in the nervous system in the disease, so that a wide field is open to speculation. The subject is, moreover, so extensive that I can do little more than touch upon it. Arguing from the known to the unknown, our knowledge of zoster enables us to infer a structural or functional disease somewhere in the nervous tract. I have been led for some time to the conclusion that the lesion in the nervous centres or paths determines the situation rather than the characters of cutaneous disease. Thus, to keep to herpes, on which plan this disease appears to be framed, it is well known that the lesion causing it may be hæmorrhage, inflammation, pressure, or growth; and, on the other hand, from one kind of structural lesion, such as sclerosis of the posterior columns, we may have such varied effects as purpura, erythema, urticaria, papules, eczema, zoster, bullæ, pustules, ulcers, gangrene, shedding of nails, leucoderma, unilateral sweating, and œdema.* It may be that the cutaneous manifestations depend upon

* See Dr. Crocker's valuable article on "Lesions of the Nervous System related to Cutaneous Disease," *Brain*, vol. vii. p. 848.

the implication of particular and differentiated centres or fibres, but I think personal or tissue proclivities have much to do with the precise changes that occur in the skin.* Thus, on the one hand, the most varied pathological changes may give rise to a single cutaneous eruption, and, on the other hand, a single pathological change may produce a multitude of affections of the skin. I think it is probable that the seat of change is in the cutaneous nerve-endings, after where, in mixed nerves, the trophic, sensory and motor fibres diverge. It is probable that the first two sets of fibres run and are distributed together, and it is possible that the same fibre subserves the two functions. Either of these suppositions would explain the escape of motor fibres. That the trophic and sensory fibres are distinct is suggested by Case 1, in which no sensory phenomena were present. It is, however, possible that the lesion is situated higher in some correlated but unknown centre. Many of the facts appear to me to suggest a peripheral neuritis, and, from what is known of the latter, to point to a parenchymatous inflammation. It is possible, however, that it may be in some cases a functional affection—a neurosis, as usually so called. Its paroxysmal character, and occasional intervals of complete freedom from disease, suggest two well-known diseases of this class—asthma and paroxysmal hæmoglobinuria—two diseases in which attacks are induced by exposure to cold and reflex disturbance. Moreover, the urticarial element often present suggests a functional affection. The excitation of the disease by pregnancy and uterine disease again suggest a reflex neurosis. With regard to the pathological process, we know that many diseases of both nervous centres and nerve-endings are caused by cold. Whether this acts as a simple reflex process, or induces some hæmic condition, is disputed, but cases of both simple and multiple neuritis appear to owe their origin to cold. Multiple neuritis is most common in adult life, the same period in which *D. herpetiformis* is most prevalent. It is also induced by such diathetic conditions as gout and rheumatism, which also are found associated with *D. herpetiformis*. Syphilis, again, is thought by some to give rise to polyneuritis, and it is possible that it may also occasion *D. herpetiformis*. In all of these conditions some toxic blood condition is brought about, and it is possible that this explains the wide distribution of the cutaneous manifestations. Apart from

* *Illust. Med. News* vol. i. p. 125.

the exact seat and nature of the changes in the nervous system, a neuropathic disposition no doubt plays an important rôle in the production of the disease. This has been insisted on by many writers, notably by Leloir; and Elliot* has pointed out the importance of shock and emotion in evolving the disease in persons predisposed to a dermatosis.

I come lastly to the treatment of the disease. This, as will have been gathered from the account of the cases narrated and alluded to, has hitherto not been very satisfactory, many cases appearing to be uninfluenced by any therapeutical measures adopted. The treatment may be divided into internal and local.

Internal Treatment.—In some cases it is necessary in the first instance to employ sedatives to secure the rest the patient so much needs. A nightly dose of chloral I have generally found most successful, but in some cases opium succeeds better. Where it is necessary to give a sedative in the daytime I have had the best results from cannabis indica; from ten to twenty minims of the tincture may be administered three times a day. Antipyrin is sometimes of great service, especially where there is a predominance of urticarial phenomena. It is best given at bedtime, or in the evening, in doses of twenty to thirty grains. Of all drugs which exercise an influence over the disease, arsenic, suggested by its marked influence on pemphigus, stands in the first rank. In a few cases it appears to be curative, in others it controls to some extent the disease, but falls short of being curative, whilst in others it entirely fails.† Quinine, in full doses, has occasionally appeared of service. I have tried opium in continuous doses, belladonna, ichthyol and various other remedies, mostly without benefit. Saline purgatives and diuretics have in a few cases appeared to do good, and alkaline tonics have been of service in improving the digestion when that has been at fault. Iodides, it should be observed, have in some cases appeared to aggravate the disease, as pointed out by Brocq and Jamieson.

Local Treatment.—Various soothing applications afford temporary relief, but do not modify the disease. Continuous swathing with

* *Journ. Cut. and Gen.-Urin. Dis.*, vol. ix., Sept. 1891.

† In administering arsenic, usually full and increasing doses to the limit of toleration should be given. Case 2 took as much as fifteen and twenty minims three times a day on several occasions.

diluted glycerine of lead I have found most comforting to the patient. Calamine lotion, soothing ointments, and powders have also been employed. I have tried the continuous bath for weeks together, with only temporary relief. One patient derived considerable benefit from a seven weeks' sojourn at Harrogate, where she had the Starbeck baths, and took the water from the same source. Dr. Oliver wrote to me to say the baths appeared to exercise a decidedly soothing influence. I have tried tarry preparations, carbolic acid and ichthyol, but have seen no decided good from them. In a recent communication, Duhring* has stated that he has long since arrived at the conclusion that the only class of remedies from which benefit is to be expected is stimulants, especially those which act revulsively, and sulphur in his experience has been the most useful. He has found it most beneficial in the vesicular and pustular varieties, and also in the bullous, but states that in the erythematous variety it usually proves irritating. At the same time he remarks that it has occasionally failed to act favourably. In the vesicular variety it is, he thinks, the best remedy that we are acquainted with. "It should be applied with friction and sufficient force to break down the vesicles, pustules and blebs as speedily as possible. The ointment should be strong, about two drachms to the ounce, and should be used in the manner indicated, with a view of making a positive impression on the skin, by causing, as it were, local shock to the nerve-endings. The rubbing should be long continued and thorough. It is useless to smear it on, as the object by this means is not accomplished." Jamieson also speaks favourably of sulphur, more particularly in children, and Dr. Corlett has published a case in which sulphur was of service.

I have used sulphur locally in the treatment of the disease, but not in the energetic and persistent manner recommended by Duhring. It is interesting to note that Duhring was first led to the employment of sulphur by the statement of a patient that this had given greater relief than all the remedies that had been prescribed for him. My patient (Case 12) also made the discovery for himself. There are instances, by no means uncommon, in which the patient has instructed his physician. The treatment by sulphur certainly demands careful trial in the manner recommended by Duhring.

* *Americ. Journ. of Med. Sci.*, vol. ci., 1891, p. 180.

LETTER FROM PARIS.

BY LOUIS WICKHAM,

Chef de Clinique adjoint to the Hospital Saint Louis.

XIII.

The discovery of perfectly distinct species of trichophyton in human trichophytosis by Mons. R. Sabouraud.

ONE of the most remarkable works lately carried out at the St. Louis Hospital is due to Mons. Sabouraud, house-physician to Mons. Besnier, and a distinguished pupil of the Pasteur Institute. He has arrived at certain results regarding trichophytosis of such importance that I cannot do better, in the interest of your readers, than make them the subject of this letter.

On Thursday, November 10th, Mons. Sabouraud brought the results of his labours before the *Société Française de Dermatologie*. These results are based upon (1) the examination of a hundred patients—clinical reports written and classified, histological reports with permanent preparations of trichophytic hairs or scales; (2) six hundred cultivations made from those patients; (3) sixty drop cultivations, specially designed to determine the botanical characters of the trichophyton; and (4) thirty positive inoculations.

In one and the same patient the size of the trichophytic spores is identical at all the diseased points. Some cases present a small spore (3μ), "trichophyton microsporon," others a large spore ($7-8\mu$). "trichophyton macrosporon." A number of histological characters enable one to distinguish the two species one from the other.

Trichophyton microsporon shows small spores not lying in a visible mycelium; the masses of small spores are arranged without order, filling the hair; they even transgress the covering of the hair so as to furnish it with a sort of external sheath.

Trichophyton macrosporon shows large spores lying in a visible my-

celium, arranged in distinct lines in the mycelial branches ; these branches are all included in the hairs, and do not form an enveloping sheath to them.

Clinical and histological researches gave the following results :—

(1) There is a very close relationship between the obstinate character of the ringworm and the *Tricophyton* microsporon. Indeed, out of twenty obstinate cases the *T. macrosporon* was found only once, the *T. microsporon* nineteen times. (2) In cases of infection at school, or from members of the same family, the spores, upon each contaminated person, maintain the same dimensions, being small if the contagion is from a case of trichophytosis with small spores, large in the contrary case. (3) Most cases of *tinea tonsurans* of the scalp are attributable to the *T. microsporon*, in the proportion of sixty per cent. ; the remaining forty per cent. are due to *T. macrosporon*. (4) In all cases of ringworm of the beard only *T. macrosporon* is found. The *T. macrosporon*, therefore, appears to be the special parasite of trichophytic sycosis. The affection of the beard is never due to contagion from a *tinea* of the scalp due to the presence of *T. microsporon*. Only *tinea* of the scalp, due to *T. macrosporon*, can prove a source of contagion to the beard. (5) All that has been said in paragraph (4) may be fully applied to trichophytosis of non-hairy parts, *i.e.*, to *tinea circinata*. That affection has as its sole cause the *T. macrosporon*, the *T. microsporon* never being present.

Thus : (*a*) the *T. microsporon* causes sixty per cent. of the cases of ringworm of the scalp, and it alone is inoculable on the scalp of children ; it only is found there. (*β*) *T. macrosporon* causes only 40 per cent. of the cases of ringworm of the scalp, and is inoculable on the scalp of children ; and, *in addition*, it produces all the trichophytoses of the beard and skin ; and these three clinical varieties, due to the same *T. macrosporon*, are mutually contagious.

*Have these clinical and histological results been confirmed by bacteriology ?—*Yes, decidedly ! and this constitutes the serious basis, the capital point, of the work. Cultures on five or six different media served to distinguish *T. microsporon* from *T. macrosporon* in the most definite manner. Cultures on potato are particularly demonstrative.

(1.) *T. macrosporon* on beer wort and agar-agar gives rise to a cultivation at first like down and white, but on the fifteenth to eighteenth day becoming flour-like, dry and yellowish. On potato, the cultiva-

tion is dry from the first, and yellowish brown. On all media the fully developed cultivation preserves its dry, flour-like aspect, and its rather pale yellowish brown colour.

(2.) *T. microsporon* assumes a little later than the preceding its characteristic appearance like down, which it retains throughout on all media, and this down always remains of a pure white colour. On potato the appearance of down is preceded during ten days by the formation of a reddish brown spot resembling dried blood.

In no single case throughout the whole series of a hundred patients did the cultivations present any intermediate aspect. The cultivation of one type could never be induced to assume the characters of the other.

Mons. Sabouraud performed several inoculations of these cultivations on the skin, and he made the experiments on himself. *Tricophyton microsporon* never provoked *tinea circinata*, and occasionally only a slight erythema, which recovered spontaneously on the second or third day. On the contrary, ordinary *tinea circinata* of the skin could be produced with *T. macrosporon*. Inoculation must be done by pricking, taking care that the sweat is not acid, and the experiment must be repeated several times.

These, then, are the two varieties which have been met with in ninety-eight out of a hundred cases. And, indeed, it happens once in a hundred times that a *tricophyton* is found, different, perhaps, from those described. Thus, in a case of *tinea tonsurans* with abnormal clinical characters, Mons. Sabouraud found a *T. macrosporon* differing from the common *T. macrosporon*. In two cases the parasites gave rise to quite special cultivations, which in no way resembled either of the types of human *tricophytosis* described. The one yielded black cultivations and was found in a *tinea circinata*, which presented special objective characters; the other, yielding pink cultures, was from a case of *tinea* of the beard. Everything points to the probability of these being examples of a direct infection of man by parasites from ringworm of animals. These facts demand further study.

CLINICAL NOTE.

FOUR CASES OF CHEILITIS GLANDULARIS. BY H. S. PURDON, M.D.,
Physician to the Belfast Hospital for Skin Diseases.

DURING the last twenty years I have met with four examples of a very rare disease, called by Professor Volkman, of Halle, *Cheilitis glandularis apostematosa*. Volkman, in fact, is the only author who has, so far as I can find, mentioned this rare and interesting complaint. Three of my cases were in males, the other in a young lady, aged 23. The age of the youngest patient was 19, and that of the eldest 27. The last-mentioned was under observation for three years. The disease was confined to the lower lip and its mucous lining; the general health was good. No trace of syphilis existed in any of the four patients. The affection began gradually, and spread over the entire surface of the lip. In the eldest patient both lips were affected and glued together in the morning. "Cold" was said to be the origin of the complaint.

Occasionally exacerbation of the disease occurred. The lower lip then became swollen, with little or no pain, firm and rather hard to the touch, whilst its mobility was more or less impaired. In one of the cases, the skin covering the chin (all the males had no hair on the chin) became of an erythematous appearance, whilst the eye could distinguish the mucous glands of the lip swollen, and likewise they might be felt with the point of finger, often as nodular masses. A turbid and muco-purulent secretion was poured out by these glands, the ducts of which were more or less dilated. In fact, there seemed to be an active catarrhal condition of the lining membrane of the cheeks and gums. Volkman mentions fistulous openings as occurring; however, I did not observe any. As for treatment, the disease seems obstinate to all remedies. Arsenic internally proved of no benefit, and the same remark applies to chlorate of potash, whilst locally the usual remedies, such as tannin and glycerine, borax, iodoform, and rubber dressing to the lip all were of no curative value. What gave most benefit was the application of "black wash" with glycerin, and occasionally pencilling the parts with solution of nitrate of silver.

An abstract of Volkman's original paper appeared in the *Saint Louis Medical and Surgical Journal* for 1871, and in the *Journal of Cutaneous Medicine*, vol. iv., p. 325.

CURRENT LITERATURE.

THE PATHOLOGICAL ANATOMY OF SCLERODERMIA. HOFFA. *München: Med. Wochenschrift.* 1892. No. 35.

Dr. Hoffa's case is an interesting contribution to this still disputed subject.

The case was briefly this. Patient, aged 34, a mason, a year previously suffered from rheumatism of the left knee. Nine months afterwards he felt a pain in the *right* knee, and believed that it was a return of the old complaint. Presently, however, he noticed a feeling of tension on the inner surface of the upper part of the thigh, which soon developed into severe pain and rendered the patient unfit for work. After eight days he noticed a doughy swelling at the seat of pain, which grew daily larger, and rose more and more above the surface of the skin. Iodine, which was applied, appeared only to increase the pain, and the patient then came under Dr. Hoffa's care.

The knee was intact; there was a bubo-like swelling extending from the knee to the junction of the middle and upper third of the thigh, and closely following the direction of the saphenous vein. It measured 21 cm. by 5 cm. at its broader part, was spindle-shaped and raised about 1.5 cm. above the normal level. The skin was reddish "from the iodine painting." The whole of the "swelling" was distinctly *in* the skin; it could easily be raised throughout its entire extent, and could be moved to and fro "like a sausage." It could not be folded, and though equally hard and thickened conveyed the sensation rather of a doughy than of a firm resistance. No pitting remained after firm pressure.

Complete excision was performed; the granulating surface was after eight days "Thiersch-grafted," and since the operation the patient has been quite free from any inconvenience.

On histological examination Hoffa found the horny layer, as contrasted with the *R. Malpighii* distinctly thinned. The papillæ were possibly here and there slightly elongated. The hair follicles, sebaceous and sweat glands were themselves normal; but their connective tissue sheaths showed marked small-cell infiltration. A similar condition was noted round the sub-papillary vessels. The connective tissue of the corium was somewhat loose; the elastic tissue normal. The chief pathological change was found in the blood-vessels. The veins and capillaries showed no notable changes, but in the arteries important changes were noted. In the smaller ones the details were concealed by an enormous number of round cells, but in the larger arteries the nature of the process could be followed.

In the adventitia there was a proliferation of cells, mostly in circumscribed areas, separating the fibres of connective tissues from each other. In the media and intima the process was more diffuse. In the media the concentric arrangement of the fibres could still be distinguished, but they were separated from each other by infiltrative cellules, and proliferation of connective tissue. No trace of the internal

elastic lamina could be found, and the proliferation of connective tissue in the media passed directly into that of the intima, which was "diffusely thickened." The thickening consisted of new connective tissue, "nests," and masses of cells. The lumen of the vessels was distinctly narrowed, and sometimes almost obliterated.

Very marked cellular infiltrations were found also in the subcutaneous fat, and here and there traces of extravasation of blood.

No change could be demonstrated in the nerves, and no micro-organisms were found by Gram's method. He sums up that the process consists in a cellular infiltration of the sheaths of the glands, and especially of the changes in the arteries.

That change he would designate a peri,—meso—and end—arteritis fibrosa, and considers it the essential process of the malady.

He points out that the case was one of a very early stage of the disease, before any shrinkage of the newly-formed tissue had led to atrophy and consequent sclerosis of the part, and claims that his observations coincide exactly with those of Dinkler (*Deutsch. Archiv. für Klin. Med.*, Bd. 48, Heft. 5 and 6).

We could have wished for still a little more information both in regard to the history and to the histology. What was the condition of the endothelium lining the vessels which, in a specimen obtained under conditions so favourable for preparation, ought to have been easily preserved? while, in view of the nature of the change in the vessels, the information as to whether or not the man had suffered from syphilis would have been most desirable, for the irregular nodular thickening of the intima shown in the accompanying drawing is most suggestive of a specific process.

NORMAN WALKER.

A CASE OF LEPROSY, WITH REMARKS ON THE NATURE OF THE LESIONS FOUND IN THE LUNGS. SHERIDAN DELÉPINE, M.B., Edin., and CH. SLATER, M.B. Cantab. (*Trans. Path. Soc.*, 1891, pp. 386-422.)

History of case.—J. R., aged 24, admitted to St. George's Hospital, August 25, 1888. Born in India on Coromandel Coast. Family English; no tubercular history. Lived in England from eighth to seventeenth year, returning to India to Bellary in Madras, where leprosy is common. Five months later swellings appeared in both cheeks, lasting six weeks. "Swellings then appeared on the front of both thighs, which were painful and prevented walking." During this period (March to August, 1880) he was in hospital and suffered from continuous fever. He then spent two years in the hills, during which time no fresh swellings appeared, while the sites of the old ones became pigmented. He was then sent back to Bellary and again suffered from continued fever for three months. In 1884 swellings appeared on the back and legs. In 1885 the voice was noticed as altered. In 1886 the first phalangeal joints enlarged, and he was in hospital for laryngeal catarrh. During this time "lumps" developed rapidly, sometimes in a few hours, and the diagnosis of leprosy was first made. In 1887 he was discharged and there was very little change till just before his admission, when he began to suffer from cough and night sweats. On admission, August, 1888, he had a typical leonine aspect, with hairless face, thickened subcutaneous tissue of brow, nose, and cheeks, and large and pendulous ears; nasal bridge depressed. Skin smooth and sallow. Trunk covered with discrete tubercles, both superficial and deep.

Scab on right elbow, scaly patch over left; numerous tubercles and maculæ over extensor surface of upper arms. Skin over back of hands and wrists thickened, red and scaly. First phalanges enlarged; nails convex and split longitudinally in middle line. Tubercles on thighs; scar of old ulcer on each ham. Over ankles and lower part of legs several small ulcers with raised edges, covered with feeble granulations which exuded a moderate amount of pus. Two or three small anæsthetic patches on front of arms. The lung disease was slight, but after his discharge in the winter of 1888 he grew worse, and after returning, May, 1889, he died with the complication of pneumothorax. During this second visit bacilli were always found in the sputum.

Post-mortem.—Body thin. Skin unevenly pigmented, of a dirty colour and scaly. The lesions present were pigmented maculæ, tubercles, ulcers (especially on the shins and right trochanter) and fissures (only on extremities). Some of the maculæ showed a dark ring surrounding a central leucodermic patch. Some were true maculæ, others apparently shallow tubercles. Of various specimens of skin examined, one taken from the wrist and rough with minute nodules gave the following typical microscopical appearances:—Over the nodules the epidermis is thinned, with swelling and deeper pigmentation of the malpighian layer; the dermic papillæ are flattened and the orifices of the sweat-glands usually obliterated. Passing from bundle to bundle of connective tissue in the dermis, especially in the nodules, are flattened fusiform tracts of epithelioid cells, consisting of angular bodies, some obviously nucleated cells, others of doubtful nature; many showed one or more vacuoles. In amongst these are large oval (some round) "leprous cells." Stained with picocarmine they are seen to contain bundles of short fibrils often with very definite arrangement. Such cells often lie loose in a cavity (perhaps lymphatic), and are often found in the deeper layers grouped round atrophied sweat-glands. Subcutaneous fatty tissue shows similar but less marked changes. Appropriate staining shows bacilli in great number in the dermis, but rarely in the epidermis. Some are found free or in small connective-tissue cells; such are short and straight, staining or decolourizing easily. Those in "leprous cells" are longer and more beaded, often fasciculated; and these and the substance separating them stain and decolourize with difficulty. In presence of many bacilli the nucleus stains badly or not at all, occasionally appearing as a vacuole surrounded by bacilli. Some cells contain several nuclei, being in fact "giant-cells." Bacilli, singly or in groups, occur on the endothelium of blood-vessels. The dark margin of a leucodermic patch on the abdomen shows much pigment in the deep cells of the rete. The ulcers, with the exception of one on the right ear, show a general absence of bacilli in the discharges and granulation. Just beneath the latter, however, bacilli are found in enormous quantity in blood-vessels and lymphatics. Advanced endoarteritis is met with.

Bones.—Sections through a phalangeal joint show a rarefactive osteomyelitis, with leprous cells containing granular bacilli; bacilli are found in small numbers in periosteum, fibro-intra-articular disc, ligaments and tendons, but never in the cartilages.

Pharynx, &c.—The mucous membrane of the pharynx, larynx, and trachea was generally granular, being in parts either thickened or ulcerated. The superficial epithelium is mostly shed and that of the acini degenerated. The tracts of angular cells are fewer than in the skin, the large leprous cells more abundant. At the level of the true vocal-cords the epithelium remains, and in this region

bacilli are abundant, being found even in epithelial strata. Elsewhere they are fewer in number superficially, being found in small quantities in the ulcerative discharges and in the ducts of the mucous glands. The bulk of the bacilli occur at a distance from the surface in the various lymph-spaces. In the laryngeal muscles they are mostly interstitial, but occasionally appear in the substance of fibres. The bacilli are mostly very short and thick.

Pleuræ and lungs.—There was general pleurisy with dense adhesions over both upper lobes. The lungs were congested and indurated, and scattered through them there were caseous patches, of and above the size of a millet-seed, some arborescent as lying within branching bronchi. Cavities also occurred whose shape or communications suggested a bronchial origin. A large cavity occupied the left upper lobe, containing curdy blood-stained fluid with caseous lumps, and surrounded and partitioned by fibroid lung studded with caseous patches and covered with caseous matter. Nowhere was there any approach to a miliary tubercle.

The general appearances were those of an extensive tuberculous broncho-pneumonia. *Microscopically*, in the less affected bronchi the epithelium is shed, sometimes appearing in continuous masses in the puriform exudation. The mucosa and adventitious coat contain many epithelioid cells: the surrounding alveoli contain either large epithelioid cells, blood, or coagulated lymph. The more diseased bronchi have still visible walls, but an indistinct lumen, the shed epithelium being as a rule broken up into detritus. Many alveoli have similar contents, others show walls thickened by congestion and infiltration. Others contain masses of undegenerated epithelioid cells, with a tendency to fuse together, and giving the part an adenomatous appearance. Hitherto bacilli of leprosy or tubercle were absent, though blue-staining cocci and bacilli were thought to occur. The large caseous masses show more extensive degenerations, though even here the outline of bronchus and alveoli is limited. Such nodules are ringed with ill-formed granulation tissue, in the midst of and outside which the alveoli are distended with epithelioid cells, which often coalesce into giant-cells, some of enormous size. A few smaller giant-cells, like those of tubercle, occur in lymphatics; most, however, are not surrounded by fibrous tissue, but either lie in a cavity or are imbedded in epithelioid cells, distending some cavity, often an alveolus. Nearly all contain carbon particles, occasionally also blue-stained bacilli. There is intense congestion, often with hæmorrhage or lymph-exudation around the caseous patches, while in their centre bacilli occur in abundance, often in bushy masses. Of unmistakable bacillus lepræ there are various forms, some being short and thick, straight or curved, others long, slender, and beaded or not. Besides, and often forming a zone between this central colony and the granulation tissue, were blue-stained bacilli and cocci. The larger caseous nodules and the matter in the large cavity consisted almost entirely of bacillus lepræ.

The pleuræ (especially the left) were thickened, as were also the septa, notably the more superficial parts. Giant-cells were numerous, lying apparently in lymphatics and not surrounded by any neoplastic tissue. Towards the surface bacilli were found free or in cells, mostly short, a few long.

Abdomen.—There was no peritonitis. The last twelve inches of the ilium was congested, and contained numerous small nodules like swollen solitary glands. There were sixteen large ulcers in the ascending and the transverse colon from $\frac{1}{2}$ to $\frac{1}{2}$ inch in diameter. They would seem to have begun as swollen nodules. They never exposed or affected the muscular coat. The lesions are due to a small cell

infiltration, causing separation and atrophy of Lieberkühn's follicles. Bacilli are found in actual ulcers only, being found among the granulation cells and debris on their floor. They are easier to decolorize than those in the skin. In the surrounding tissue giant-cells were found, apparently in lymphatics, but never with any suggestion of a granuloma.

The liver shows increase of fibrous tissue, which in Glisson's capsule is aggregated into nodules, containing many large and small vacuolated cells. Between the liver-cells and in the capillaries, in and around the walls of the portal venules (but not of the hepatic arterioles) were numerous short granular bacilli.

The spleen was fibrosed with numerous patches of necrosis, in one case only amounting to actual caseation. Bacilli are absent in these patches, though occasionally found in surrounding giant-cells. They abound round trabeculae and arteries (which often show extensive arterio-sclerosis), and occur in groups also in the pulp either free or in small vacuolated cells.

Lymphatic glands.—Various groups of lymphatic glands were enlarged and congested, some showing numerous tiny whitish nodules. Many of their lymphatic spaces are found to contain large leprous cells, crammed with bacilli; the lymphoid tissue is in other parts replaced by vesicular epithelioid cells containing discrete bacilli.

Nerves.—The brachial, lumbar, and sacral plexuses were macroscopically healthy looking. The ulnar nerves at the elbow show interstitial neuritis, and contain bacilli wherever lymphatics exist, and also apparently in the substance of the nerve-fibres. The other organs which were examined showed no specific leprous lesions.

Discussion of the Case.—The authors note, in passing, the contraction of the disease in a leprous district, the symmetry of the lesions, and the pyrexia accompanying their appearance. Against the experience of other observers, all attempts to demonstrate bacillus lepræ in lymph, blood, or pus obtained during life were unsuccessful. Dealing with the lung lesions, they quote numerous observers, of whom the majority are adverse to the existence of a true leprotic phthisis. They then cite statistics from leper asylums at Trinidad and Kakaako as proving (1) that lung affections are very common indeed in leprosy, as also is ulceration of the intestine and diarrhoea; (2) that though the lungs are said to be affected by tuberculosis, it is admitted that the pleuræ, bronchi, and bronchial glands are the seat of leprotic lesions; (3) that while the skin and internal organs are admittedly leprous, the lungs are affected by a different disease; (4) that finally the lungs may be the seat of tuberculosis, though crowded with the parasite of leprosy. From a mass of contradictory evidence, the authors argue that at present there is *no method of distinguishing the bacilli of tuberculosis and leprosy by their staining reactions*. As to the *distribution* of the bacilli in the various organs, they occur in the skin (uniformly), in the mucous membranes of the mouth, pharynx and larynx, in certain nerves, and in certain lymphatic glands, in bones and in the liver, but are absent in the kidneys, suprarenals, thyroid, and the mucous membrane of the stomach, small intestine and bladder. Of the various tissues, they are most abundant in areolar connective tissue, whether continuous or supporting muscular or other elements, and then in lymphoid tissue. In denser tissues and in epithelium they are rare, and are entirely absent in all forms of cartilage. Except in the presence of very active pathological change, the bacilli avoid such sites as are exposed to air.

The short discrete bacilli found free or in small cells stain and decolorize with ease, but stain with difficulty after long steeping in alcohol, a process which does

not affect the long bacilli contained in leprous cells. These are, moreover, more refractory to staining and decolourization. Again, the bacilli found in the skin, mucous membrane of larynx, nerves and lymphatic glands are long, stain rapidly, and decolourize with difficulty, while the reverse holds in liver, spleen and bone.

The bacilli, then, of tubercle and leprosy are indistinguishable; either, therefore, may equally well have caused the lung lesions in this case. But inasmuch as this was a broncho-pneumonia suggestive of an unusual form of tuberculosis, is it not possible that after all leprosy is only a modified form of tuberculosis, which reverts to the tubercular type only when virulent enough to attack certain organs, *e.g.* lung? Such a view would explain the resemblance in form and pathogenetic action of the bacilli of leprosy and tubercle, the frequent occurrence of phthisis and scrofula in leprous patients, the fact that leprous inoculation is rarely successful save when the lesions have such atypical situations as the lungs, and the production in the latter cases of an apparent tuberculosis. Until, however, undoubted bacillus lepræ can be made by inoculation to produce definite tuberculosis or leprosy, it is not possible to decide for or against this view.

Appended is a valuable bibliographical appendix.

ARNOLD BILL.

DISSEMINATED SUPPURATIVE HYDROADENITIS. M. WILLIAM DUBREUILH. *Annales de Dermatologie et de Syphiligraphie*, May, 1892.

THE general name of agminated or disseminated folliculitis comprehends a large variety of affections characterized by a centre of inflammation more or less deep-seated, the relations of which to the pilo-sebaceous follicles are sometimes very evident and sometimes very uncertain. Of these diseases there is a type that will strike all observers by the deepness of the lesion as well as by its possible exclusive localization to the palmar and plantar regions. M. Brocq, in his book on "The Treatment of Skin Diseases," has given a very clear though brief description of it, and, more recently, M. Barthélémy has written a very important article on the same affection, of which he recognizes two varieties under the names of *Acnitis* and *Follicelitis*. But if the clinical description given by these authors is complete, it certainly is not so with the anatomical; they were not able to specify the anatomical starting point of the lesion, probably because they had studied the disease at too advanced a period. It was reserved to M. Dubreuilh to complete that study, and, in a most interesting case, to localize with certainty the disease in the sudoriparous glands.

The case was that of a girl of twenty. From the age of seven she had constantly suffered from lesions on the hands and feet, but for the last two years these had spread generally, and now the face also was attacked. The lesions began as little nodules varying in size from a pin's head to that of a pea, hardly visible but distinctly palpable; though not movable under the skin yet deep in the derma. They would gradually grow up to the surface, and at the end of a fortnight would get quite painful, giving rise to deep "pustules" or small abscesses; these in turn would presently ulcerate, heal and disappear, leaving round cicatrices with a diameter of two millimeters on the hands to one centimeter on the elbows and knees. The total evolution of a single eruptive element occupied about a month on the average.

The eruption was always fairly continuous: almost every day some new lesions would appear and all follow a similar course; and while more abundant in the spring or at the menstrual period, the eruption would never completely stop.

Again, the lesions were never in any way grouped, and if by chance the cicatrices were found confluent, this confluence was successive not simultaneous. They spread over a considerable portion of the body; on the face they resembled the pustules and cicatrices of acne, while on the ears and back they could hardly be distinguished from that disease. Some marks were noticeable between, as well as above and beneath the breasts. In the lumbar regions, on the forearms, on the thighs, legs and feet, numerous scabs testified to the existence of many lesions antecedent to those which actually covered these regions. Under the influence of daily baths the patient gradually recovered; the existing lesions rapidly disappearing and being replaced only by very few new ones; but it was impossible to consider the cure quite definite.

Microscopic examination was made of four perfectly recent lesions, consisting of a simple but hard nodule, deeply imbedded and just appearing on the skin as a reddish elevation. In the three first ones studied, the lesions began in one or several sudoriparous glands, and from these spread to neighbouring ones, the central glomerules being always, however, the most diseased. The morbid change consists of an infiltration of embryonic cells in the interstitial tissue of the glomerule. The epithelium of the secreting tubes becomes less regular, its cells very rapidly multiply, cease to form a single layer, and soon even the canals can hardly be distinguished. Presently the last traces of normal gland-tissue disappear, and the glomerule is only represented by a mass of small embryonic cells mixed with others of an epithelial kind, evidently derived from the multiplication of the glandular cells. Besides the lesions of the sudoriparous glomerules there is also an actual leucocytic infiltration enveloping the excretory tubes of the inflamed glomerules as well as the blood-vessels passing between these and the skin. In the first three lesions there were some hair-follicles showing no alteration, and in the fourth, though these also were healthy, the sebaceous glands were clearly inflamed. A careful examination, however, showed the inflammation to be only secondary, and the pus could easily be traced to the sudoriparous glands immediately underneath; indeed, only at the point of contact with the latter was the membrane of sebaceous cells at all altered.

In short, this was clearly an inflammation of the sudoriparous glands, which by spreading to the sebaceous cells might have been mistaken for an acne, if a complete study of the different lesions had not unmistakably revealed the progress of the disease in its various phases.

There can be no doubt that the *acnitis* and *folliclitis* of M. Barthelémy are only varieties of the same affection, to which can also be referred the observations of Bronson and Fordyce as well as of Pollitzer, who, after studying similar cases, had arrived at similar conclusions, viz., *hydroadenitis*. Lastly, it should be added, that the recorded experiences of Brocq and Besnier seem all to concur with or confirm the opinion that the disease is entirely due to a suppurative inflammation of the sudoriparous glands, which must be considered as a disseminated suppurative hydroadenitis.

G. DE LAUBENQUE.

ATROPHIA MACULOSA CUTIS. DR. JADASSOHN, of Breslau. (*Transactions of the German Dermatological Society, Congress III., held at Leipsic, 1891.*)

Dr. Jadassohn gave particulars of a case which presented somewhat remarkable

anatomical characteristics. He had been unable to find any record of a similar case.

A. Z., female, æt. 23, presented herself at the Breslau clinic with a skin affection of the upper extremities.

History.—Parents healthy, and no history of any skin trouble. When a child, had whooping cough and measles; at the age of 9 she scalded her hands, and the scars are still visible on the backs. No sign of syphilis or any neurosis. At 18 she noticed red spots over both elbows, they were painless, did not itch, but gradually increased in size. Similar spots appeared on the arms and forearms in the course of a year, and then she noticed that the skin became blanched in the centre of the spots and sank below the level. She suffered practically no inconvenience from them, only over the elbows the area tingled at times with "the change of weather." Two years ago a white-swelling of the right knee laid her up for some time, and subsequently healed with ankylosis.

Status præsens.—General condition good, and the patient looks well. Old-standing white-swelling of right knee quite healed, skin of thighs showed striæ in fair amount of the ordinary type. That of the upper extremities was most interesting. The disease was chiefly confined to the extensor aspect, reaching from the deltoid region to the wrist. It consisted of:—

1. Bright red area from a lentil to a farthing in size, depressed below the level of surrounding skin, and covered with a wrinkled epidermis. They were distinctly thinned to the touch.

2. Dark red spots confined to the olecrana, about the size of a shilling, covered more or less by furfuraceous epidermis. Striæ extended in all directions from the circumference of these patches, and showed as similar depressions in the skin.

3. Striæ more or less grouped and red, blanching on digital pressure.

The symmetrical distribution was remarkable. Lanugo slightly developed. The nervous system revealed nothing abnormal, and neither the cutaneous nerve distribution or Voigt's lines bore any relation to the patches and streaks.

With the exception of the elbow region, where pain was easily elicited on pressure, sensation—pain, pressure, heat, electricity—was perfectly normal. Other organs healthy.

A small piece of the affected area was excised, and the patient left the hospital. Some months after she returned with a papular eruption on the left fore-arm, not unlike a papular syphilide. In the course of three weeks the papules disappeared, leaving well-defined depressions. The patient now stated that was how all the other spots went—first pimples and then depressions, which gradually extended in area.

A microscopic examination of the excised portion revealed a more or less complete disappearance of the elastic fibres of the cutis. In some places, especially near the circumference of the area, islets of elastic tissue were visible, but generally speaking between the pars papillaris and the lower limit of the corium this tissue was wanting.

This change evidently began in the upper layers of the cutis. There were no signs of any inflammatory process. Some of the blood-vessels, however, were more conspicuous than normal by a round-celled infiltration in their vicinity. The hair, sebaceous and sudoriparous glands were normal. The nerves were also unchanged.

The epidermis was diminished in thickness, but otherwise showed no structural alteration.

Dr. Jadassohn thinks that inflammation is the prime factor, as seen in the red papule, followed by atrophy and disappearance of the elastic element.

In reviewing the literature on the subject of maculæ and striæ atrophicæ, he finds no case recorded of atrophy of the elastic element of the cutis. The maculæ atrophicæ, the result of involution of papular syphilides mentioned by French authors, are not caused by the loss of elastic substance only, but by a general atrophy of the skin structures.

He next alluded to Dr. Liveing's observations where an hypertrophic condition—a phasis papularis—preceded the atrophy. Dr. Liveing considered this hypertrophy to be allied to sclerodermia; in Dr. Jadassohn's case there was nothing to support such a view. Pellizari's case of erythema urticatum atrophicum differs from the above case in localisation, nature and suddenness of the rash.

Finally, Dr. Jadassohn discusses the terminology of the disease, and proposes the name of "Anetodermia erythematodes." The former word designates the loss of the elastic element, the latter the erythema-like process which starts the affection (cf. lupus erythematodes).

FRANK H. BARENDT.

FUCHSIN IN PAGET'S DISEASE. (*Journ. Cut. and Gen.-Urin. Dis.*, July, 1892.)

George T. Elliot, of New York, describes admirable analgesic and healing effects in an extensive case of Paget's Disease of the Breast from the application of a *Fuchsin Ointment*. This preparation immediately moderated the itching and sore feeling; the raw and exuding patches gradually healed over, and the characteristic granular appearance disappeared. The progression of the disease entirely ceased, and though a cure did not result, great benefit was experienced.

The ointment was made by incorporating chemically pure fuchsin (grains ij-v) in a base composed of lanolin 3j beaten up with Ag. Rosæ 3vij. This was spread an eighth of an inch thick on stout linen, cut so as to accurately cover the surface affected, and over this a thin layer of absorbent cotton was laid. The dressing was generally renewed twice daily.

ELECTROLYTIC TREATMENT OF SCLERODERMIA. (*Journ. Cut. and Gen.-Urin. Dis.*, July, 1892.)

Brocq deduces the following conclusions from the study of a case. (I.) That electrolysis may itself set up some sclerosis, and therefore the action of the needle should be limited as much as possible to the sclerodermic tissues, and consequently he introduces the needle very obliquely, almost parallel to the surface of the skin.

(II.) That the electrolysis acts in these cases in quite a mysterious manner, that it can act at a distance, and that it does not act at all by its destructive power. That we must, therefore, seek to obtain the electrolytic action with the minimum amount of destruction, and hence pass feeble currents for a relatively short time at each point, and multiply the punctures at each setting.

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LYMPHANGIOMA CIRCUMSCRIPTUM CUTIS.

BY ALFRED G. FRANCIS, B.A. (CANTAB), M.B., B.S. (LOND.), F.R.C.S.

CIRCUMSCRIBED lymphangioma of the skin is a disease so uncommon that I feel that no apology is needed for recording the clinical notes of some cases which I have had the opportunity for studying in the last few years. The literature bearing directly or indirectly on the disease is already very large, but has perhaps dealt with the subject more from the anatomical or pathological than from the clinical standpoint.

In this paper, therefore, I propose (1) to describe the cases which have come under my own observation, and some others—the notes of which have been kindly entrusted to me by several friends—and (2) to attempt to group the recorded cases, basing their classification partly on their anatomical and partly on their clinical features.

CASE I.—W. L., male, ætat. 14 years, bricklayer's apprentice, was admitted into St. Bartholomew's Hospital on January 8rd, 1884, under the care of Mr. W. Bruce Clarke, to whose kindness I am indebted for permission to publish my notes of the case.

Family History.—Father died of "heart disease," mother died of "cancer," one brother died when a baby, and one sister of "fever" when an infant; one brother and five sisters are living and well.

He is the only member of the family suffering from any skin disease; there is no history of nævi or moles in the other members; there is no history of tuberculosis.

Previous History.—He is English by nationality, and neither he

nor his parents have ever been abroad ; he has had no serious illness, and with the exception of the present complaint has always been healthy.

History of Present Affection.—He has suffered from the disease “nearly all his life,” but is unable to say definitely when it first appeared ; for the last two or three years at least, and possibly longer, he has been troubled with slight illnesses connected with the disease. They occur about every six weeks and last two or three days, and consist of, *locally*, great tenderness in the affected parts, so that he is unable to sit down or bear the slightest pressure, and, *generally*, severe vertical and occipital headaches, nausea, and complete anorexia, but without constipation or diminished excretion of urine ; the general symptoms subside with the local ones, and between the attacks he feels perfectly well in every way ; there has been throughout a slow and steady increase of the disease, but there is no history of any marked increase in connection with the above-mentioned attacks, nor is there any history of erysipelas, inguinal adenitis, or inflammatory affections other than these.

Present Condition.—With the exception of the skin affection nothing abnormal was discovered.

The Skin.—Dark complexion, dark hair ; a small brown sessile mole exists on the upper inner part of the right forearm, and a similar one on the right side of dorsal region of the back, and a pedunculated pigmented *verruca mollis* on the anterior fold of the left axilla ; with the exception of these and the disease described below, the skin over the whole body is soft and perfectly natural ; there are no *nævi vasculosi* or varicose veins, and no *lineæ albicantes*, scars or other evidences of previous lymphatic obstruction or inflammation ; the inguinal glands are not to be felt ; there is no general enlargement of the right lower limb.

On the right buttock are numerous irregular growths in the skin, varying in size from a small pin’s head to a five-shilling piece ; the growths are clustered together in groups about the more prominent part of the buttock, and in the sulcus between the buttocks, but are separated by a margin of healthy skin from the anal verge ; the patches are irregular in shape, and separated by very narrow tracts of natural skin, so that in places they appear confluent, and at a short distance the area seems to be occupied by a diffused warty-looking

growth with smaller growths scattered around it; in different parts the growths present marked differences in character.

(a.) They are most exuberant in the sulcus between the buttocks; here they are raised fully a quarter of an inch above the general surface and are somewhat flattened by the pressure of the contiguous buttocks; this part of the disease is hid from view until the buttocks are separated; these growths are of a dull reddish colour, somewhat like that of a tubercular syphilide; are firm and resisting to the touch, and though rendered slightly paler by pressure are not completely bleached; the surface appears rough and "warty" to the naked eye, but with a lens it is seen to be made up of a number of minute nodular eminences, and the *stratum corneum* to be smooth; there is no appearance of cysts or vascular tufts.

(b.) On the most prominent part of the buttock the growths are only raised about the sixteenth part of an inch above the general surface, are very numerous and closely clustered, and some of the patches are more or less crescentic in outline, some are much larger than others and appear to be formed by the coalescence of smaller patches, which are thickly scattered about them; these growths are not so red as those at (a), and appear to consist of numerous contiguous papules with flattened summits; there is no evidence, even with a lens, of marked increase of the *stratum corneum*, or of vesicles or vascular tufts, and they seem to differ from those at (a) in degree rather than in kind.

(c.) Around the larger growths on the peripheral parts of the right buttock, over the greater part of the inner half of the left buttock, and on the upper and back part of both thighs (just below the folds of the nates, which partially conceal them), are numerous small growths, varying in size from a small pin's head to a silver penny; they are distinctly separated from one another by healthy skin, and are more numerous on the right buttock than in the other situations, where they are scanty and irregularly scattered, but are more numerous on the left buttock than on the thighs, and on the left thigh than the right one. All these smaller growths are brighter red than the larger ones, and are completely bleached by pressure, and even the most minute ones can be distinctly felt with the finger; the smallest appear to consist of one little red papule with a somewhat flattened summit, which is paler and distinctly vesicular, contrasting markedly with the

reddened base; the larger ones of clusters of little papules with flattened summits and with little or no evidence of vesicles. There are no vascular tufts. The vesicles are quite the exception, and are only found in the youngest and smallest patches; in the older and larger growths the cuticle seems thicker, the papule more solid and the patches of a duller red colour. These different types of growth are evidently only different stages in the development of the disease, and there is no line of demarcation between the areas in which they occur, but there is a complete series of gradations between the smallest papule at (c) to the large exuberant growths at (a). In none of the growths was there any appearance of dilated capillary blood-vessels.

January 7th.—The larger patches were shaved off to the level of the skin, and the raw surfaces treated in different parts with (i.) thermocautery, (ii.) fuming nitric acid, (iii.) salicylic acid cream: the outlying patches were all touched with the thermocautery. The wounds healed, and on January 27th he was discharged apparently cured.

May 28th, 1884.—Re-admitted. The part of the surface which was excised and treated as above is now the seat of a raised brawny growth, of a reddish-brown colour, with smooth glazed surface, less prominent but firmer than the preceding growth: it is not bleached by firm pressure and has a few shallow fissures traversing it in various directions; there is no evidence of the presence of vesicles; over the rest of the right buttock, extending beyond the area of the pre-existing growths, are numerous isolated patches, varying in size from a pin's head to a sixpenny-piece, studding the skin so thickly in places as to become almost confluent: the appearance of these fresh patches is quite different from those that formed the bulk of the disease before operation; they consist of distinctly isolated vesicles, or groups of vesicles, very like those of herpes, situated on a slightly raised base, which is faintly red in colour; the vesicles are translucent, covered by firm cuticle and not easily ruptured, and vary in size from those which can be only seen with a lens to others which are the size of a large rape-seed: by squeezing up the skin containing them the vesicles may be dilated to twice their original size, but not ruptured: on pricking them a clear fluid escapes containing a few leucocytes, but no coloured blood-corpuscles. The vesicles seem never to burst spontaneously, and there are no crusts.

There are a few similar patches on the left buttock, but none on the thighs.

In spite of the rapid return and spread of the disease, there have been no fresh attacks of pain, &c., as before his first admission.

May 30th.—Some of the large patches were excised, the smaller were treated with the thermocautery.

July 13th.—Discharged: nearly healed.

I have not seen this patient since, and am not aware whether the disease returned again or not.

Portions of the growths from (a) and (c) and of the scar and new growths on re-admission were hardened in Müller's fluid, and sections made and stained with picrocarmine and hæmatoxylin solutions.

The smallest papule from (c).

The whole papillary layer with the superjacent epidermis is raised and projects above the surrounding skin, the surface being smoother than usual: the central part of the little eminence is occupied by the lymphangioma. *Stratum corneum* slightly increased in thickness over the whole eminence. *Stratum lucidum* and *stratum granulosum* are well defined but not much thickened. *Stratum Malpighii* over the most prominent part of the eminence is much thinned—consisting of 3-5 cells—by the pressure of the growth below, and the lower border is for the most part smooth, owing to the partial or complete obliteration of the interpapillary processes; in some places traces of these remain as shortened thickened projections fitting into the sulci between the coils of dilated lymphatic capillaries, or between neighbouring cysts, but over the most prominent part of the eminence there is no elongation of these processes. More laterally the interpapillary processes are elongated and thickened, passing downwards by the side of the little lymphangioma, in some cases almost to the normal level, but variously bent and distorted where pressed upon by the dilated lymphatics. The intercellular cement substance is increased, and the "prickles" of the *rete* are very distinct; there is increase of the cells of Langerhans, and of the pigment in the cells of the *rete*. The lymphatic capillaries are in the form of closely packed coils for the most part, but in the most central part of the growth septa have broken down between them to form minute multilocular cysts or caverns, with septal remains projecting into them. In all cases the epidermis is separated from the lymphatics

by a well-defined lamina of connective tissue, which in places is reduced to one or two delicate bundles.

The contents of the cysts are lymph coagula, with occasional leucocytes; in some there is a slight admixture of blood; but nowhere are blood-cysts seen. The endothelial lining is well marked and consists mainly of normal flattened cells, in some places they have a more embryonal character and are more closely packed, and occasionally connections between them and the fixed connective tissue of the surrounding corium can be traced. There is an increase of the cells in the corium, and especially along the lymphatics and blood-vessels, but no large cell-clusters are seen: the small cysts are connected at their deepest part with dilated lymphatics running in the sub-papillary layer. Near the lower part of the lymphangioma may be occasionally seen dilated blood capillaries, which seem to be the anatomical explanation of the reddened base of the eminence.

In the skin between the minute eminences, the clustering of cells along the blood and lymph capillaries is well marked, but there are no large cell-clusters; there are also varicose lymphatics here and there. *In the patches of recurrent lymphangioma appearing somewhat like herpetic vesicles*, the appearance is somewhat similar, except that the changes affected a wider extent of surface: the smallest cysts still occupy the original papilla as small cylindrical or oval cavities with a single loculus and are apparently only varicose lymphatics, and cause but slight alterations by pressure in the superjacent epidermis and surrounding interpapillary processes, but there are all gradations between these and the largest vesicles, which hardly differ from the growths from (c) except that some are larger and more cavernous in character: in some places very elongated interpapillary processes dip down between neighbouring cysts, these probably represent the lateral processes at (c). The cysts vary very much in shape, being cylindrical, oval, rounded, or pyriform with the broader end uppermost, or of coils cut in various directions, or of irregular multilocular cavities, *i.e.*, of all gradations from the dilated or varicose or tortuously coiled vessel to the cavernous lymphatic. The subpapillary layer contains abundant dilated and varicose lymphatics and numerous clefts between the connective tissue bundles. The cell-clusters are much more marked both around the vessels and in rounded and irregular clumps, especially near the smaller cysts, and

in the papillary corium at present devoid of cysts: in some of them are clefts as if young lymphatics are developing, as pointed out by Török: there are no blood-cysts, and little evidence of hæmangioma, except for the clustered cells along the blood-vessels.

The cicatrix shows the structure of a very vascular scar. The epithelium is thickened in all its layers, and there is an almost complete absence of papillæ and interpapillary processes, and where present they are small and rudimentary. There is great increase of pigment in the *rete*. The cutis consists of irregularly arranged and closely packed bundles of connective tissue with abundant fibroblasts, and blood and lymph capillaries; in some places the latter are varicose.

The growth at (a) presents the most extreme condition; the sections appear to the naked eye like delicate pieces of fine lace, from the extensive excavation of the superficial parts of the corium by the dilated lymphatics.

The surface is most irregular, with large sulci and crypts; the epidermis is much thinned over the largest cavities, but at the bottom of the sulci is thickened very irregularly, with heaped-up horny cells and epithelial pearls, and there is well-marked hyperkeratosis in the form of elongated irregular spikes, composed entirely of stratum corneum projecting here and there from the surface.

The cysts are of all shapes and sizes, from dilated lymphatics to large and irregular caverns, separated by enormous interpapillary processes, grotesquely distorted. There seems to be everywhere a layer of connective tissue between the epidermis and the cysts, even when the latter are very large; the cell-infiltration is very abundant, and presents similar features to that in other sections; there are no blood-cysts, and no further evidence of hæmangioma. The cells of the clusters have very various shapes, judging from their nuclei, which are round and deeply stained with logwood, or oval, round, or elongated, and take the stain less readily.

CASE II.—A. B., male, ætat. 3½ years, was an out-patient at St. Bartholomew's Hospital in August, 1884, under the care of Mr. W. Marrant Baker, to whose kindness I am indebted for permission to use my notes of the case.

Family History.—There is no history of any similar eruption, or of nævi; there is no history of tuberculosis.

Previous History.—He is English by nationality, and has never been abroad ; with the exception of the skin affection he has had no illness of any moment.

History of Affection.—On the third day after birth a rash was noticed for the first time on the right leg ; it was entirely confined to the leg, and extended from near the inner malleolus along the inner part of the leg to near the knee ; it has persisted and gradually spread ever since. The mother states that the growths seem to be irritable at times, as the child scratches them ; but there is no history of attacks of inflammation in this region.

Present Condition.—With the exception of the skin affection, nothing abnormal was discovered.

The Skin.—No *naevi vasculosi*, no moles, and, except in affected area, the skin is apparently natural.

The eruption is limited to the right lower limb, groin, and perinæum, and is distributed in the form of an elongated streak extending from the inner malleolus, along the line of the internal saphenous vein to the region of the saphenous opening ; here the streak divides into two branches ; one passes upwards and outwards along the line of the inguinal fold to near the anterior iliac spine ; the other passes backwards in the fold between the scrotum and thigh to the perinæum, where it ends near the anus ; the scrotum, penis and buttock are quite free from the disease.

Below the knee the streak is composed of little elongated patches, which are slightly raised above the surface, firm, dull red, and possess a surface appearing like orange-peel under a lens ; there are no vesicles to be seen, and no vascular striæ, and the *stratum corneum* does not appear to be much thickened. On the lower part of the thigh the patches are smaller, rounder, and present the same general characters, but in addition there are numerous little reddish papules, with flattened vesicular summits scattered around the larger patches, and also patches of indistinctly vesicular eminences, which have no reddened base. At the upper part of the thigh, and especially in the fold between the scrotum and thigh, these vesicular clusters are more distinctly marked ; the vesicles in all cases are tough, and cannot easily be ruptured.

As in Case I., therefore, the younger stages of the growths appear more vesicular, the older ones more papular or plaque-like ; in none

of the growths was there any appearance of dilated capillary blood-vessels.

No microscopical examination was obtained, and the case was shortly after lost sight of, but the close similarity between the earlier stages in this and Case I. leaves no doubt in my own mind that this was also a case of lymphangioma. There was no enlargement of the inguinal glands, and no enlargement of the affected limb.

CASE III.—L. K., female, ætat. 55 years, came under my observation in October, 1887.

Family History.—Unimportant; there was no history of tuberculosis.

Previous History.—Has always enjoyed fairly good health, except that of late she has been troubled with "rheumatism."

History of Affection.—The patient is quite sure that the region affected was quite natural until three years ago, when she received a severe blow in this situation; shortly after recovering from this injury the patch of diseased skin gradually appeared, but there has been no extension of the disease lately. There have been no recurrent attacks of inflammation.

Present Condition.—With the exception of a slight amount of sciatica in the right thigh, and the skin affection, nothing abnormal was discovered.

The Skin.—On the left side of the face, below the attachment of the lower eyelid to the cheek, is an irregular transversely-elongated patch of diseased skin; it extends from a point opposite the middle of the lower eyelid, inwards to the side of the nose, but the eyelid and nose are quite free from the disease.

The patch consists of a thickened portion of skin standing freely above the surface of the surrounding skin (pachydermia), but with ill-defined margins; the surface of this little plaque is of the natural colour of the skin, and possesses no hyperæmia or any vascular striæ, but is very thickly studded with minute translucent vesicles, varying in size from a millet-seed downwards. These vesicles have tough walls, and when pricked a clear fluid exudes; there are no isolated vesicles, and no teleangiectases on the face; the parotid and sub-maxillary lymphatic glands are not enlarged.

There was no microscopic examination made in this case, but it

appeared to be a typical case of varicose lymphangioma of the skin, associated with a slight amount of pachydermia.

CASE IV.—M. A., female, *ætat.* 16 years, came under my observation in October, 1891.

Family History.—There is a very marked history of pulmonary tuberculosis, but no history of *nævi* or moles.

Previous History.—Patient has never been very strong, and has been subject to “bronchitis.” She was born in England of Irish parents.

History of Skin Affection.—At birth a “mother’s mark” was noticed, which was reddish-blue all over; the clear vesicles mentioned below have only been present for a few years, but are gradually extending.

Present Condition.—Pale and weakly, with physical signs of early pulmonary (apical) tuberculosis, there has been slight hæmoptysis on different occasions, nocturnal sweating, and loss of flesh.

The Skin.—Fair complexion, auburn hair. Excepting the diseased patch the skin appears quite healthy.

On the left side of the chest in the mid-axillary line, and following the course of the tenth intercostal space, is a streak of *nævoid* growths, extending over an area about three and a half inches long and an inch deep.

The growths vary in size from a small pin’s head to a silver penny for the most part; but one of them is three-quarters of an inch long by a quarter of an inch deep; they are about fifteen to twenty in number. The largest growth is reddish-blue in colour, but rather paler than an ordinary capillary hæmangioma; this is the original “mother’s mark”; it is slightly raised above the surface of the skin, but contains no vesicles, apparently, when examined with a lens; scattered around this growth, but separated from it by apparently healthy skin, are many little growths composed of a single vesicle or of a group of vesicles; these vesicles stand boldly up from the surface of the skin, vary in size from a large hemp-seed downwards, are perfectly translucent, and have no vascular striæ on them; they have tough walls, not being easily ruptured, but they dilate to about twice their original size when the skin is pinched up; on pricking them clear fluid exudes; there are also two little patches quite similar to the above, except that the vesicles have a few little delicate vascular

striæ running over them ; and, lastly, there is a patch about the size of a threepenny-piece, which consists almost entirely of clustered vesicles, but running across it is a curved band of hæmangioma, consisting of little dilated blood-vessels and little reddish-blue eminences like minute blood-cysts, so that in this case we have exhibited at the same time, over a limited area, several quite distinct types of growth, forming complete gradations from a pure hæmangioma to a pure lymphangioma.

The patient states that the patch is sometimes rather tender, but there is no history of inflammatory attacks ; she also says that there is sometimes rather more swelling in the region of the growths, but when examined the neoplasm seemed limited to the skin, and there was no evidence of subcutaneous growth ; there are no enlarged axillary lymphatic glands.

November 1st.—The oblong patch of skin was excised, leaving a rectangular gap (this included all the growths except one minute group of clear vesicles, which was situated somewhat farther back than the rest). On cutting through the subcutaneous tissue several enlarged, tortuous, subcutaneous lymphatic trunks, with varicose enlargements the size of large peas, were divided ; the tissue through which these ran was very dense, and showed here and there oblique and transverse sections of these vessels, with smooth, shining walls. Rectangular skin-flaps were raised above and below the gap, and drawn towards each other and sutured so as to completely close the gap, the resulting wound being in the form of a broadened letter H. Drainage and firm pressure were used. There was some lymphorrhagia and subcutaneous hæmorrhage, but the bulk of the wound healed by first intention. The resulting scar was much overgrown, forming a sort of keloid.

This patient was shown at a meeting of the Hull and East Riding Branch of the British Medical Association on October 30th, 1891.

November, 1892.—The patient has had no recurrence ; the little cluster of vesicles that was left has undergone no change ; the scar, which for several months was thick and stood up boldly from the surface, has become quite flattened out, and is represented by a broad band of tissue looking like atrophied skin ; in some places this is a quarter of an inch wide.

Microscopical Examination.—Two small growths were examined,

both consisting of minute vesicles, one possessing vascular striæ, and one without.

The description of the growths at (c) in Case I. applies in all its details to them both, and need not be repeated; but in the one with vascular striæ in addition there were seen small dilated blood-capillaries lying between the epidermis and the minute lymphatic cyst.

The hæmangiomatous growth was not examined.

CASE V.—X. Y., female, ætat. 17 years, was under the care of Mr. W. J. Walsham, at St. Bartholomew's Hospital, and was shown as a case of "lupus lymphaticus" at the Dermatological Society in London, on July 11th, 1883. The case is referred to as "Walsham's Case" by Crocker in his work on "Diseases of the Skin," p. 502, and by Malcolm Morris in *The International Atlas of Rare Skin Diseases, Fasc. I. Art. Lymphangioma Circumscriptum*, but the case has never been published. There is a water-colour drawing of the case in the Museum of St. Bartholomew's Hospital, No. 465a. The patient is of English nationality. The skin affection has existed since the patient was two months old.

Present Condition.—The disease is situated in the left axilla, mainly on the side of the chest midway between the two axillary folds. It consists of about fifteen small growths, varying from the size of a small pin's head to nearly that of a shilling; these growths consist of isolated translucent vesicles, or groups of clustered vesicles, standing abruptly from the surface of the skin, and containing a clear fluid; little vascular tufts are found running over the surface of some of the vesicles; there seems no tendency to spread; the area over which the growths are scattered is rounded and about the size of the palm of the hand, and there is no regular distribution over an intercostal space, as in Case IV.; the patches are rather tender to the touch.

There is no evidence or history of pre-existing hæmangioma.

No microscopical examination was made. I am much indebted to Mr. Walsham for allowing me to add this case to the series.

CASE VI.—A. B., female adult, was under the care of Mr. W. Morrant Baker, at St. Bartholomew's Hospital, and was shown by him at the Dermatological Society of London on June 10th, 1885. There is a water-colour drawing of the case in the Museum of St. Bartholo-

mew's Hospital, No. 465c. I am much indebted to Mr. Baker for his kind permission to make use of this case.

The patient is of English nationality.

History of Skin Affection.—Some of it was congenital, the rest of the growths have appeared since birth.

Present Condition.—The disease occupies the right axilla and right arm and is arranged somewhat in the form of a streak; this occupies principally the bottom of the axilla, but also extends downwards over the coraco-brachialis and inner half of biceps to about the middle of the arm; there are also some small clusters on the pectoral fold.

The growths vary in size from a shilling downwards, the majority of them being much smaller. They consist of clear, translucent vesicles, or groups of clustered vesicles, standing boldly up from the surface of the skin. Many of them have little tufts of dilated blood-vessels extending over and around them.

There is no history or evidence of capillary nævus.

No microscopical examination was made.

CASE VII.—M. N., female, ætat. 8. This patient was in Guy's Hospital, under the care of Dr. Pye-Smith, in January, 1885. The case is briefly referred to in Fagge's "Principles and Practice of Medicine," Second Edition, Vol. II., p. 1017, and I am much indebted to Dr. Pye-Smith for his kindness in allowing me to make use of his notes of the case.

History of Skin Affection.—Part of it was congenital and consisted of an ordinary nævus, the rest, which was composed of dilated lymphatics, was a later lesion of uncertain duration, certainly many months, perhaps as much as two or three years; there was no obvious growth in the two or three months that she was under observation.

Present Condition.—The child was otherwise healthy. On the left thigh was an eruption consisting of a large rounded patch occupying the outer aspect of the limb in front of the left trochanter and of a strip descending thence to nearly the mid-thigh, not unlike zona, following the external cutaneous nerve. The transparent vesicles were arranged in groups, and some of them contained extravasated blood; the fluid in the vesicles was nearly free from leucocytes, and in some cases it was tinged with blood; when accidentally ruptured red or black scabs were formed.

The lesion was somewhat tender when touched, and sometimes ached a little. No treatment was adopted.

CASE VIII.—Dr. Pye-Smith informs me that he has had a second case in a young adult, in which lymphangioma and hæmangioma of the skin occurred together on the thigh.

From the pathological point of view, it is impossible to separate cases of circumscribed lymphangioma which affect the skin only, from those in which precisely similar conditions of the skin co-exist with lymphangioma of the subcutaneous or deeper tissues, or with congenital elephantiasis and congenital tumours of mesoblastic origin, such as neuromata, hæmangiomata, fibromata, lipomata, &c., or even acquired elephantiasis in its varied forms, if we use the term lymphangioma in its widest meaning and include all instances in which extensive lymphangioblastic processes occur. This large and varied group has been fully dealt with by many writers, and especially by Busey,* and Esmarch and Kulenkampff.†

In a limited number of cases, however, which have come more especially under the notice of dermatologists, lymphangiomata may affect the skin, at any rate in the first instance, alone. Those hitherto described possess much in common, although they vary in details, and some of them seem to serve as connecting links between the purely cutaneous forms and the more generalized forms of lymphangioma referred to above. It is this artificially circumscribed group of cases that will be dealt with in this paper.

In 1890 Noyes and Török‡ collected several published cases of this disease, and Török, in this elaborate and exhaustive paper, and also in a subsequent one,§ discussed the anatomy and pathology of the affection, and its relation to allied diseases. Since the former date several cases have been recorded, and I think we are better able now to obtain a clinical picture of the disease from the possibility of

* Busey, (1) "Congenital Occlusion and Dilatation of Lymph Channels" (1878); (2) "Occlusion and Dilatation of Lymph Channels (Acquired Forms)," *New Orleans Medical and Surgical Journal*, 1876 and 1877.

† Esmarch and Kulenkampff, "Die Elephantiasischen Formen," 1885.

‡ Noyes and Török, "Lymphangioma Circumscriptum (Lymphangioma Capillare Varicosum)," with plate of microscopical structure, *The British Journal of Dermatology*, Vol. ii., No. 12, 1890, p. 359, and Vol. iii., No. 1, 1891, p. 8.

§ Török, *Monatshefte für Prakt. Derm.*, Bd. xiv., No. 5, March, 1892. Abstracted in *The British Journal of Dermatology*, Vol. iv., No. 12, December, 1892.

studying a larger series of examples; and though they all appear closely allied, yet for descriptive purposes they may be conveniently divided into groups and sub-groups, of which I would suggest the following.

Group I.—Lymphangioma simplex.

„ II.—Lymphangioma cavernosum.

„ III.—Hæmatolymphangioma (L. simplex et varicosum et cavernosum).

„ IV.—Lymphangioma (s. et v. et c.) with pachydermia.

Group I.—Lymphangioma Simplex (Lymphatic Nævus of Hoggan).—The only case I have been able to find is that recorded by Hoggan,* and it is doubtful whether it should be included under the term of circumscribed lymphangioma. It may be defined as consisting of a *dense plexus of normal-sized, normal-walled lymphatic vessels, with no alteration in the surrounding tissues*. The clinical notes were as follows :—

John H., ætat. 9 years.—Generally healthy till age of six years; he had then an “erysipelatous” inflammation on the right foot and lower half of right leg: on subsidence this left the part swollen and a large number of pale purplish spots the size of a split pea. After being on his legs all day the swollen parts became very painful in the evening. In the following year he had a similar attack in the same locality, and was in bed for a fortnight; during the last few months he has had several similar attacks, followed by pain and œdema of the leg and ankle. There has been no alteration in the appearance of the spots from the first.

Present Condition.—When lying, the surface of the skin of the leg and foot appear very little altered, the spots being in no way prominent in shape or colour; on moving about much or standing, the spots become distended like vesicular papules, and this distension can be caused when lying down by encircling the limb with the hand and drawing it down against the lymphatic stream.

Microscopical Examination.—The spots consisted of a lymphangioma of the deeper portion of the corium, composed of a dense plexus of normal-sized, normal-walled lymphatic vessels, with no alteration in the surrounding tissues; there was no tendency to dilatation or varix, and the distension was due, not to incompleteness of the valves of varicose lymphatics, but to the presence of a multitude of comparatively valveless lymphatics (“collecting type”). The vessels were larger at the circumference than at the centre, but in the latter situation they were very closely packed; for the most part they ran horizontally, with slightly oblique

* Hoggan, “On Multiple Lymphatic Nævi of the Skin and their Relation to some Kindred Affections of the Lymphatics,” *Journal of Anatomy and Physiology*, 1884, Vol. xviii., p. 804, plate xvi.

connections between the ill-defined planes of vessels, but in the region of the hair-follicles and sweat-glands the vessels were parallel to them and perpendicular to the surface. The epidermis was twice as thick as natural, glistening and desquamating, with narrow, deep furrows dividing the surface into irregular rectilinear figures. There was absence of the non-medullated nerves of the sub-epidermic plexus, and presence of a large number of the cells of Langerhans.

The condition of the resulting scars was healthy.

Hoggan suggests that this condition of lymphatic nævus is not uncommon (which is my reason for including the case in the series), but considers this case to be an early example of elephantiasis, basing his theory on the recurrent inflammatory attacks and the presence of a swollen leg. Török agrees with him, and considers that the hyperplasia of the lymphatics was not congenital, but due to the inflammatory attacks, with perhaps a congenital predisposition of the lymphatics of the patches to proliferation; but as the inflammatory attacks are to be found in cases of circumscribed lymphangioma (*infra*), and as elephantiasis may also be a sequel (*vide* the case of T. and C. Fox), it is possible that cases may exist where this form of lymphangioma is confined to the skin, and is unassociated with general elephantiasis.*

Group II.—Lymphangioma cavernosum (Török), (*Lymphangioma tuberosum multiplex* of Pospelow and Harlingen).—Under the name of *lymphangioma tuberosum multiplex*, Kaposi† first described a case which subsequently‡ he considered similar to that of Pospelow (*vide infra*). Hoggan classed it with that of the Messrs. Fox, while he thought Pospelow's case was similar to his own. Crocker§ and T. Colcott Fox|| included it with Pospelow's and Van Harlingen's cases, and Török, in 1890, looked upon it as a "tuberous or fibromatous lymphangioma," and distinct from the other two. Recently, however, several writers have tried to show that it was probably not a

* From a recent communication that I have received from Dr. Colcott Fox, who had this case under observation at the Victoria Hospital for Children, I learn that he also considered the lymphangitis and œdema of the limb to be secondary to the nævus condition.

† Hebra and Kaposi, "Diseases of the Skin," New Sydenham Society's Translation, Vol. iii., p. 887; "Hebra's Atlas," lief x., Tafel 6.

‡ In the Third Edition of this work, *vide* Second French Edition, translated by Besnier and Doyon, Vol. ii., p. 366.

§ Crocker, "Diseases of the Skin," 1888, p. 504.

|| T. Colcott Fox, "Lymphangiectasis of the Hands and Feet in Children," *The Illustrated Medical News*, Vol. iv., No. 44, July 27th, 1889.

case of lymphangioma at all, but rather of epithelioma adenoides cysticum.*

I have been able to find but two cases, those of Pospelow† and Van Harlingen.‡

Pospelow's Case.—Female, ætat. 23 years.—Patient had papillomatous growths on the external genitals.

There were other tumours distributed over the whole surface of the body, except the palms, soles and scalp.

The largest was congenital, and at the junction of the skin of chest and mamma; it was the size of a pigeon's egg, and composed of a number of smaller ones the size of rape-seeds massed together. The smaller growths varied in size from a rape-seed to a hazel-nut, and had all appeared since birth.

In the few years she was under observation fresh growths developed.

The smaller growths could be all emptied by pressure, and filled again spontaneously, and on compression gave a sensation comparable to that felt on pressing an umbilical hernia in a child.

The colour of the growths was partly pink, partly violet, and some were somewhat translucent, and discharged when incised a small quantity of a cloudy fluid, which was, for the greater part, of the consistency of fresh gelatine.

Histology.—It showed the appearance of a cavernous lymphangioma of the deeper strata of the skin. There were many oddly-formed cavities with broken-down walls, into which remnants of former septa protruded, and dilated lymphatic capillaries.

Pospelow considered the case similar to that of Kaposi.

Van Harlingen's Case.—Female, ætat. 30.—There were large numbers of tumours of various shapes and sizes distributed over the whole body, together with numerous teleangiectases and irregular brownish patches of pigmented skin.

The tumours in some instances resembled flabby molluscum fibrosum growths; in others smooth lilac or bluish elevations, varying from the size of a pin's head to that of a hazel-nut, and so compressible under the finger as to feel like bladders filled with air, or giving a sensation like that felt on compressing an umbilical hernia in a child.

On section they appeared pearly, gelatine-like, semi-transparent masses.

Histology.—They consisted of fibrous and granulation tissue, with irregular spaces and sections of dilated lymphatic (?) vessels.

These two cases closely resembled each other. In both the patients

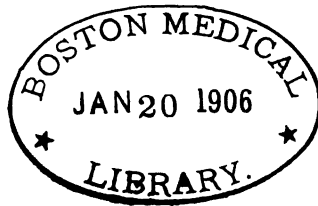
* *Vide* Besnier and Doyon, *loc. cit.*, Vol. ii., pp. 365–373; Brooke, "Epithelioma Adenoides Cysticum," *The British Journal of Dermatology*, Vol. iv., No. 9, p. 269, September, 1892, and Török's later paper.

† Pospelow, *Vierteljahresschrift für Dermat. und Syph.*, Vol. vi., 1879, p. 521. (Quoted from Török.) With plate.

‡ Van Harlingen, "Transactions of American Dermatological Association," 1881. (Quoted from Dühring, "Diseases of the Skin," Third Edition, 1887.)

were young adult women, and the growths appeared after birth (though, in Pospelow's, one was congenital), and the distribution, size, colour, consistency, and structure were very similar. In Pospelow's case there were papillomatous growths on the genitals, and in Van Harlingen's molluscum fibrosum, and also patches of melanoderma and teleangiectasis. This association of pachydermia is also very noticeable in most of the varieties of lymphangioma, and the pigmentation and teleangiectasis in Van Harlingen's case serve to connect them with the Hæmatolymphangiomata; in some cases belonging to this latter group small cavernous spaces may occasionally be found: these will be referred to later on.

(To be continued.)



CLINICAL NOTE.

KERATOSIS OF THE PALMS AND SOLES, PROBABLY DUE TO ARSENIC.

BY T. COLCOTT FOX, M.B. (LOND.), F.R.C.P.

A YOUNG gentleman, aged 20 years, who was recently sent from Australia to England to obtain the benefit of the sea voyage, was recommended to consult me on account of a chronic intractable thickening of the skin of the palms and soles. The patient had been under the care of several medical men of position, but his medical history, as I obtained it, was somewhat indefinite. Six years previously, shortly after his first and only connection with a woman, the patient suffered from multiple "sores" on the penis. At this time he did not consult a doctor, but fifteen months later, after a sea bath, he was alarmed by the sudden discovery of a red eruption, which developed into blebs. This eruption commenced, he says, on the chest, became generalized, and continued off and on until the time of his leaving Australia. The bullæ formed crusts of considerable size, and left faint scars. Syphilis appears to have been diagnosed by several well-known practitioners, and the term *rupia* was applied to the eruption. The patient states that he never had a sore throat or tongue, or bubos, *i.e.*, I suppose, glandular mischief, attracting his attention. He took iodide of potassium on one occasion only, but it "poisoned him." Mercury was administered in one form or another for four years and three-quarters, and arsenic for at least four years. Thus I gathered from his prescriptions that the patient was ordered five minims of liquor arsenicalis thrice daily in October, 1888; fifteen minims of Donovan's solution thrice daily in November, 1888; about two and a half minims of liquor arsenici hydrochlorici thrice daily in February, 1889; then arsenious acid and liq. arsenici hydro-

chlorici for a time, and finally liq. arsenicalis in four-minim doses, thrice daily, down to about September, 1892.

When the patient consulted me in November, 1892, he informed me that the exhibition of green iodide of mercury pills just before his voyage, the discontinuance of other medicine, and the sea voyage itself, had greatly improved his health. All bullous eruptions had ceased, and, I may here say, have remained absent. He was still rather pale. His palms and soles were greatly thickened and disfigured, and, in such a manner as to suggest an arsenical origin, and to make me carefully examine the rest of the body for other evidences of this causation. His face had a peculiar but slight muddy tint, which might well have escaped notice. The neck was rough and dirty-looking, and his body much mottled with dirty-looking pigmentation, which I think was due to arsenic and not to pre-existing eruptions. The skin, generally, of the limbs and body was harsh and dry, with indications of faint desquamation, but without any psoriasiform patches on the elbows or elsewhere. There was an indication of a scar on the glans penis, but no other objective sign of syphilis, whilst under my observation, unless the condition of the palms and soles be considered such. The latter regions presented a considerable thickening of the epidermis, simulating hereditary congenital keratosis, the thickening extending to the wrists, to the distal extremity of the nails, which were not involved, and half-way up the sides of the palms and fingers. The feet were similarly affected. This thickening appeared at first sight to be diffuse and uniform, but on closer inspection a number of distinct lesions, like plane warts, could be made out in the general keratosis. During the subsequent treatment it became evident that the palms and soles were studded all over thickly with growths like ordinary plane warts, and that these were united with a general diffuse keratosis. Moreover, there were plane warts, discrete or confluent, on the flexor aspects of the wrists and over the dorsal aspect of the finger and toe joints.

I found it impossible to elicit from the patient a very exact history of the onset of this condition of the palms and soles. He believed that it commenced in the early part of 1889, *i.e.*, after he had been taking arsenic somewhat less than six months. I could not elicit any history of hyperidrosis, nor could I detect with a magnifying glass

any special development of the lesions in connection with the sweat-ducts.

My treatment consisted of local remedies only. I had the palms and soles thoroughly soaked in soda and hot water each day, and when the epithelium was sufficiently macerated, vigorously attacked with pumice stone. Then Unna's strong salicylic acid plasters were applied night and morning, and worn throughout the twenty-four hours at first. Under this treatment the condition rapidly ameliorated, and soon there were only isolated warts to deal with. When I last saw the patient the hands and feet looked quite cured, and meanwhile the patient had wonderfully improved in his general health.

The causation of this palmar and plantar keratosis seems to have been either syphilitic or arsenical, though we must remember that the palms and soles assume a somewhat similar condition under other influences, such as in congenital pemphigus, and perhaps hyperidrosis. We are not in a position, however, as yet to estimate the influence of the arsenic frequently administered in such cases.

Its distribution and character were unlike any syphilitic lesion, as far as my experience goes, nor could I detect at any time any evidence of infiltration of the cutis. On the other hand, we know that the administration of arsenic, in certain persons, excites, amongst other effects, peripheral nerve and vascular lesions, evidenced particularly in the palms and soles. I understand that "the pink palm" was a clinical sign looked for by a past generation of practitioners as evidence of the saturation of the system with arsenic. Mr. Hutchinson has lately quoted Hunt's Report on arsenic with regard to the formation of vesicles of the palm. Redness of the palms and puffiness of the hands are mentioned by several writers, and we have the evidence brought forward by Pringle, Crocker, and Brooke, as to the probable causation of keratotic conditions by arsenic. Mr. Hutchinson has especially dealt with the subject of arsenical warts or corns, and in preparing a reprint of Morrow's Work on *Drug Eruptions* for the Sydenham Society, I came across references to similar facts in writings by Erasmus Wilson, McCall Anderson, and Stewart of Canada.

Erasmus Wilson writes (*Lectures on Dermatology*, 1873):—"While on the palm of the hands and soles of the feet it (arsenic) produces

not only desquamation, but also thickening of the epidermis to a considerable degree from hyper-nutrition, and occasions the formation of minute granular corns, each little corn corresponding with the aperture of a sudoriferous duct."

McCall Anderson states (*Diseases of the Skin*, 1887) that "an erythematous rash, too, is not uncommon, especially on the face, neck, palms, and soles, and in the last situations this may be followed by great thickening and induration, which has a papulated character."

In conclusion I may say that I had the advantage of Dr. Pringle's opinion in the case I now record, and he recognized the condition as one probably due to arsenic.

CURRENT LITERATURE.

CLINICAL AND ÆTIOLOGICAL RESEARCHES ON PSORIASIS. Dr.
LUDW. NIELSEN, of Copenhagen. (*Monatshefte für Praktische Dermatologie*,
vol. 15, Nos. 7 and 8.)

DR. NIELSEN'S paper on psoriasis is a careful and valuable contribution to our present knowledge of this disease. The article is divided into three parts, dealing respectively with the clinical relations, the ætiology and the pathology of the complaint. Under each heading a general critical review of the current literature is given, together with many additional facts. The observations are founded on the careful investigation of a large number of cases, nearly a thousand in number.

1. With regard to the localization of the lesions, which were noted in 862 cases, in 489 these were distributed over the trunk, extremities and head, on the extremities alone in 118, and on the head alone in 5 cases. Nielsen remarks that the eruption present on the trunk alone was extremely rare, thus differing from the lesions of syphilis. Affections of the nails usually only occurred when the disease was very widespread and in very old-standing cases, and in most of these there was also some eruption on the hands and feet. There was no characteristic lesion of the nails. The presence of a peculiar balanopostitis psoriatica on the glans penis, and on the inner surface of the prepuce was not uncommon; in one case (occurring in a child) the first spot of psoriasis appeared on the penis. The special abundance of hair sometimes described in patients with this disease was not observed, and the presence of a lesion on the mucous membrane was never seen. The cause of the localization of the eruption was considered possibly to be mechanical irritation by the friction of clothes or irritation from the occupation and habits of the patients, and might be compared with the somewhat similar distribution of scabies, etc. The view that it was in any way due to nerve influence appeared purely theoretical.

Some careful observations were made as to the beginning and the process of spread of the disease. In the large majority of cases it first appeared on the extremities, especially about the knees, elbows and crural regions, primary lesions of the scalp coming next in frequency. In 38·6 per cent. of the cases observed it appeared first as small isolated spots, which remained more or less unaltered for at least six months, and often for years, and in some very old-standing cases the lesions had never extended. In 61·8 per cent., however, the development was more or less acute. With regard to the treatment, the results with iodide of potassium appeared better than with arsenic, thus the duration of the outbreaks under the two treatments are given as follows:—Under iodide, adults gave an average duration of 38·7 days and children 61·9 days; and with arsenic, adults 52·3 days, and children 90 days. The iodide was given in very large doses. Dr. Nielsen considers it possible that if the treatment with arsenic was pushed to the highest possible degree which the patient could stand, the results might be as rapid as with

the iodide treatment. Under both treatments it was markedly noticed how much longer the outbreaks last in children than in adults; for instance, 47·8 days to 74·7 days. It was also remarked that the disease in the case of patients in the hospital disappeared very rapidly in alcoholic subjects, probably because of the removal of the alcohol. The outbreaks did not as a rule disturb the general constitution, and a rise of temperature was never noted. In as many as forty-eight patients the disease had lasted with or without treatment for over twenty years; in some, even as many as fifty years. With the exception of chronic alcoholics and persons suffering from chronic joint rheumatism there was no tendency for the disease to get worse as time went on.

II. *The Ætiology of Psoriasis*.—The disease occurred in males and females in the proportion of three to two, the average was highest before fifteen and then between twenty and thirty; for instance, in 44 per cent in children, and only 2·7 per cent in people over fifty. With regard to heredity, there was no certain evidence that the outbreak of psoriasis in several members of the same family was due to heredity; it was possible and, in fact, quite as likely that contagion played a part. With regard to the relation of this with other general diseases, there appeared to be some connection with joint rheumatism and with arthritis deformans, and it was noted in three patients that the exacerbations of psoriasis and of joint affections went together. The observations by some French authors (Besnier, Brocq and others) that the joint rheumatism of psoriasis patients was of nervous origin was never noted in any of Nielsen's cases. Psoriasis sometimes, but not always, completely disappeared during an acute illness, *e.g.*, in one patient with pleurisy and in two cases with typhoid, and it sometimes disappeared in chronic diseases such as cancer and diabetes. A local combination with other exanthems was occasionally noted. So also psoriasis might develop on the actual seat of other lesions, such as erysipelas, scarlet fever, and in one case actually on the spot where vaccination had been performed. Roches gives two cases, both without any hereditary or other predisposition to psoriasis, which some eight or nine days after inoculation with animal lymph showed spots of psoriasis at the seat of inoculation.

Mycosis fungoides and epithelioma have been known to start in psoriasis spots, but cancer is rare in psoriasis patients; certainly no special *rapport de succession* (Hardy) could be maintained.

Some observations on the relation of psoriasis to local irritation are of interest. For instance, in addition to Köbner's case, with excoriation, other cases have been described from the scratching of the nails, in the marks from cupping, and after the friction of a bandage. In psoriasis patients the development of a spot may be produced by a slight injury to the superficial layers of the epidermis. Nielsen's experiments in this direction gave positive results in fifteen and negative in twenty-seven cases. It was observed that not only these, but also chemical and thermal irritation might, in some cases, determine the seat of the disease. The same relation to local irritation has been described in other skin diseases, notably in urticaria, eczema, lichen ruber, and lupus.

III. *The Pathology of Psoriasis*.—The first point discussed is whether psoriasis is a constitutional disease or a special blood infection. None of the theories known with regard to this disease are held as tenable, namely, whether it be the result of a supposed diathesis (rheumatic, etc.) or a recognized constitutional condition (syphilis or malaria), or a blood infection with a specific parasite (*penicillium glaucum*, *epidermidophyton*, *leptocolla repens*). The experiments of Destot of self-

inoculation are described, so also the question of psoriasis being a general infectious illness is discussed, with the conclusion that it is not very likely that psoriasis is a general disease, although conditions pointing to this conclusion could not be altogether put aside. The next theory discussed is whether psoriasis is of neuropathic nature, as several writers have maintained, pointing in this direction being the symmetrical distribution of the disease, and the fact that it occasionally follows pregnancy. Polotebnoff found that the disease was very rarely hereditary, and that it frequently occurred in subjects with an abnormal nervous system, and appeared to be the system of a vasomotor neurosis. Several French authors (Besnier, Doyon, Brocq) have held the same view. After discussing at some length the several arguments in favour of this theory, Nielsen concludes that it is not likely that the origin of psoriasis is to be found in the central nervous system.

The last theory discussed is the possible parasitic nature of the lesions. This theory was elaborated by Lang, who described a fungus in the psoriasis spots, and he obtained good results by treatment with parasiticides. Against this theory is the fact that not a single case is recorded where the disease has undoubtedly been conveyed from one individual to another; as, for instance, from husband to wife, or *vice versa*. Lang explained this on the supposition of a necessary predisposition on the part of the skin itself for the reception of the germ, and compared this with the well recognized parasitic disease, pityriasis versicolor, where again communication is very rare. Against Lang's theory there is the fact that psoriasis undoubtedly often disappears under the internal treatment by arsenic, and Lang explained this on the supposition that the drug circulates in small quantities in the blood, and so had an anti-parasitic action. There is also the tendency for the disease to recur, and the supposed incurableness of the complaint. Notwithstanding many arguments to the contrary, it appears to the author that the theory first worked out by Lang, and to which in several directions additional material has been added, is in all probability the correct one—the cause being either a hyphomyceton or a schizomyceton.

W. KNOWSLEY SIBLEY.

TWO CASES OF MELANODERMA WITH PIGMENTATION OF THE BUCCAL MUCOUS MEMBRANE IN PATIENTS WITH PHTHIRIASIS AND NOT PRESENTING THE GENERAL SYMPTOMS OF ADDISON'S DISEASE. M. LE DR. GEORGES THIBIERGE. (*Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris*, December 18th, 1891.)

CASE I.—A man, æt. 59, having had rheumatic fever, yellow fever, ague and syphilis. He had suffered from eczema of the ears throughout his life. He presented all the symptoms of long-standing phthiriasis with ecthymatous pustules. A brownish, or brownish-yellow pigmentation, more marked in certain situations, was present all over the body, the hands and feet excepted. Brown patches were also seen on the glans penis and mucous surface of the prepuce. On the mucous membrane of the cheeks were scattered rounded patches of pigmentation from 2 to 4 millimeters in diameter. On the arch and veil of the palate were brownish-yellow spots with vascular dilatation. Near the labial commissures were patches of leucokeratosis (buccal psoriasis of Bazin).

CASE II.—A man, æt. 70, with no history of any previous maladies, and present-

ing symptoms of phthiriasis. The skin of the trunk as far as the umbilicus was somewhat pigmented, and with a great number of small scattered brown spots; below that level the discolouration was slight. The limbs were pigmented, and showed marked evidence of irritation. The penis and buccal mucous membrane were affected similarly to those in the previous case, the vessels in the latter situation being considerably dilated.

In neither case were there any symptoms of general disease. Both these are considered as cases of "vagabond's disease," the patients being in a dirty, badly-nourished condition, and distinguished from the pigmentation of Addison by the covered parts being chiefly affected, and the colour not having the somewhat greyish appearance seen in the latter disease.

After referring to similar cases recorded by Besnier and Greenhow, and drawing attention to the fact that all the patients are aged, and have few and bad teeth, but to which he attaches no causal relation, he pleads for a careful study of such cases, as they reduce the pathognomonic value of the pigmentation of the mucous surfaces in Addison's disease.

H. W. MARETT TIMS.

AN UNUSUAL CASE OF TUBERCULOSIS OF THE SKIN. MR. W. DALE JAMES and DR. NORMAN WALKER. (*Sheffield Medical Journal*. October, 1892.)

THE authors report the case of a girl, æt. 19, with a family history of phthisis, and having during the preceding month visited a relation who died of phthisis.

The disease commenced on the eyelid six weeks after re-vaccination, and was quickly followed by maculæ on the face and hands, and subsequently on the legs, neck and scapular regions. The character of the eruption varied in different localities, that on the face and hands being like chronic chilblains, that on the neck resembling lichen planus. A patch on the cheek was deep purple, with a brownish tint towards the centre, due to round, soft, brownish nodules, some with white specks like cysts about to rupture. On the legs the spots, which were very numerous, were slightly depressed, well-defined, and of a deep purple colour, shedding a fine pellicle.

Histological examination revealed, in an earlier stage, cellular nodules in the corium and subcutaneous tissues, starting from the lower border of the rete Malpighii; the hair-follicles showed no marked changes; but there was an almost entire absence of sebaceous glands. The sweat-glands and ducts showed diffuse round-celled infiltration with increase of epithelium. The nodules were chiefly composed of cells with large nuclei, and a distinct giant-cell was found. Occasionally, in the tumour, cysts lined with epithelium, and having horny contents, were present.

In the older nodules, which were more sharply circumscribed, the fibrous tissue was more dense, and they were all separated from the rete by connective tissue. The cysts, which were seen to be the remains of sebaceous glands, were more numerous.

Various forms of treatment have been unsatisfactory, the actual cautery being the only method employed with any success.

After eliminating leprosy and syphilis, the authors conclude that it is similar to Leloir's lupus sclerosus. That it was not due to vaccination infection is probable from its exclusive development for two years on the face and the vaccination marks presenting no abnormality.

H. W. MARETT TIMS.

FAVUS CONTAGION FROM THE LOWER ANIMALS. DR. S. SHERWELL.
(*American Veterin. Review.* November, 1892.)

DR. SHERWELL relates some interesting cases of favus communicated from mice. In one instance four members of one family were affected, having evidently been infected from pet dogs, one of which had previously been found playing with a sick mouse, which, from the description, was affected with severe favus eruption. Some of the mice were caught, and on microscopic examination the achorion was evident. Dr. Sherwell says that the irritation in mice is so great that he has found the calvarium destroyed by scratching, and the parasite affecting the brain and its membranes. He also relates instances of ringworm infection from kittens. After mentioning the treatment by iodide of sulphur with alkalies, he suggests, as an after treatment, constant saturation with raw linseed oil and frequent washings with tar soap, believing oils to be parasiticide by preventing oxygenation of the moulds.

H. W. MARETT TIMS.

PITYRIASIS MACULATA ET CIRCINATA. DR. GEORGE D. HOLSTEN.
(*Brooklyn Medical Journal.* October, 1892.)

AFTER referring to the rarity of pityriasis (? *P. rosea*) in America (only thirty-five cases of all forms amongst 8,000 under Dr. Bulkley), Dr. Holsten records three cases of *Pityriasis rosea* in adult females, which illustrate certain variations. In one case the irritation was so great that the patient was compelled to relinquish her occupation, whilst in another subjective symptoms were entirely absent. Again, in one case the scales were so abundant as to lead to the idea of psoriasis. In all three cases the patients suffered from constipation.

After mentioning the opinions of various authorities as to the varieties and causation of the disease, and giving the differential diagnosis, Dr. Holsten recommends treatment by ichthylol in paste or ointment form, with the addition of menthol and warm baths to allay irritation, and states that resorcin effected the disappearance of the disease as quickly as any other remedy.

H. W. MARETT TIMS.

LYMPHANGIOMA CIRCUMSCRIPTUM. DR. M. B. HARTZELL. (*Medical News.* January 16, 1892.)

THE writer records a case of this disease in a boy at. 15 It commenced about the third month after birth, and was not congenital. It consisted of a patch of irregularly shaped vesicles on the left shoulder, many of which were of a reddish hue, due to minute tufts of capillaries within them. The skin between the vesicles was normal. The contents consisted of pale yellow, clear serum; but if ruptured were mixed with blood. The vesicles may remain for many months unchanged, but they eventually disappear by absorption of their contents, fresh vesicles appearing from time to time. There were no subjective symptoms and no evidences of any inflammation. The lesion gradually spread on to the shoulder, the former sites showing atrophy of the skin, with faint pigmentation, and a few small isolated papules.

Ten other cases—viz., those recorded by Hutchinson, Tilbury and Colcott Fox,

Crocker, Malcolm Morris, Kübner, Noyes, Walsham, and Elliott—are referred to. In all, the disease appeared in early childhood, the majority in early infancy. Three cases were associated with some abnormality of the vascular system.

Thorough cauterization by caustics or the actual cautery, so as to destroy every portion of diseased tissue, is advocated as being the only treatment likely to be of any service.

H. W. MARETT TIMS.

SO-CALLED PEMPHIGUS NEUROTICUS. DR. NEUBERGER, of Breslau.
(*Transactions of the German Dermatological Society*, Congress III., held at Leipsic, 1891.)

A FEMALE, æt. 26, with pronounced hysteria, came under the author's care, said to be suffering from secondary syphilis. On examination two scar-keloid growths close together were found in the right dorsal region. The right middle finger was represented by a stump, very sensitive to the slightest pressure, and from which pain at times would suddenly shoot up the arm, radiating over the right half of the chest and of the back. Two years previously the finger was removed at the metacarpophalangeal joint owing to gangrene subsequent to injury. She also stated that the scar-keloid growths on the back came out first as blebs, then formed ulcers, and finally assumed their present condition. After remaining in the clinic some four weeks numerous blebs suddenly appeared over the right mamma and above the right clavicle. At the same time the menses made their first appearance. The eruption kept on recurring, and after a period of four months spread over the left breast and upper extremity. It generally developed during the night; a burning sensation was complained of, small blebs appeared, which gradually increased in size, many becoming confluent. They were filled with a clear yellow serum, were fairly resistant to pressure, and were surrounded by a wheal-like margin, the pale-red colour of which gradually passed into that of the surrounding normal skin. The blebs remained thus for some days; the contents then became inspissated, and thick yellowish-green crusts formed. They were easily detachable, leaving depressed suppurating fetid ulcers. Cicatrization was slowly accomplished, and keloid growths developed. Instead of blebs developing always, necrotic areæ would sometimes make their appearance, looking as if the skin had been cauterized. The status hystericus revealed complete analgesia and great diminution of sensation on the right side. The conjunctiva was insensitive and a slight keratitis appeared, which soon yielded to treatment.

The stump was removed, but nothing abnormal was found in the nerves after most careful research. The eruption kept on recurring, and in addition small spots of necrosis were noticed on the mucosæ of the lips, tongue and mouth. There was also a crust on the mucosa of the right labium majus. Fugitive erythematous spots came out on the face. In spite of treatment, the general health gave way, emaciation rapidly progressed, and the patient died from collapse after being some four months under Dr. Neuberger's care.

The autopsy revealed syringo-myelia; the peripheral nerves showed no macroscopic changes.

Dr. Neuberger proceeds then to discuss the literature of the disease. He draws attention to the cases reported by Kaposi and Doutrelepon with the title of "*Zoster gangrænosus recidivus atypicus hystericus*." He differentiates his case of

pemphigus neuroticus by the presence of blebs at the very outset, and the large crusts which are shed *en masse*, leaving a purulent secreting surface behind.

Histologically Dr. Neuberger found primary necrosis of the Malpighian layer and secondary changes in the *pars papillaris*, the reverse of what Kaposi states in connection with his cases.

As regards the post-mortem discovery of syringo-myelia, Dr. Neuberger insists on the absence of any prominent symptoms during life pointing to such a condition. Muscular atrophy, Duchenne's *main en griffe*, were wanting, although he thinks the presence of others (analgesia, diminution of the field of vision, the healing of the pemphigus sores with keloid formations) might be interpreted as favourable to the diagnosis. Finally he pleads for more extensive researches into the nature of syringo-myelia and its relation to dermatoses.

In the discussion that followed, Dr. Doutrelepont stated that most careful post-mortem research of the central nervous system failed to reveal any change that could account for the skin affection in his case referred to.

Professor Neisser was of the opinion that the syringo-myelia should be viewed as the result of peripheral neuritis, and the hysteria but superadded. He reconciles Doutrelepont's case with the one related by Neuberger, in regarding the former as not having lived long enough for the cavities to have been formed, and that the spinal cord had really undergone changes not sufficiently advanced, owing to the death of the patient, to be recognized.

As regards the nomenclature of the disease. Neisser would reserve the term Zoster for those affections which are distinctly referable to the nerve distribution, and Tropho-neurosis for those which, though caused by nerve changes, cannot be thus referred. These terms can be qualified by herpeticus, bullosus, gangrænosus, &c.; and hence Dr. Neuberger's case could be appropriately called one of Tropho-neurosis bullosus et gangrænosus.

The formation of keloid-tumours mentioned by all authors who have reported these cases is difficult to account for. Professor Neisser, however, stated that even in healthy subjects, where skin has been removed for transplantation purposes, keloid-tumours have developed *in situ*.

FRANK H. BARENDT.

LEPROSY IN BRITAIN.

IN chapter ii. of Dr. Creighton's well written and erudite work,* which we commend to the notice of all physicians, the author deals with leprosy in medieval Britain. We quote his introduction, "as an essential preliminary to any correct handling of the historical records of British leprosy." "The history of leprosy in Britain can hardly be the history of leprosy alone, but of that disease along with others which were either mistaken for it or conveniently and euphemistically included under it. That there was leprosy in the country is undoubted; but it is just as certain that there was *lues venerea*; that the latter as a primary lesion led an anonymous existence, or was called *lepra* or *morphea* if it were called anything; that the remote effects of the *lues* were not known as such, being taken for detached or original outcomes of the disordered humours, and therefore in the same general class as leprosy manifestations; and that the popular and clerical notions

* A History of Epidemics in Britain from A.D. 664 to the extinction of Plague. Cambridge: At the University Press, 1891.

of leprosy were too superstitious and inexact, even if the diagnostic intention had been more resolute than it was, to permit of any clear separation from the poor victims of lupus and cancer of the face, of scrofulous running sores, or of neglected skin-eruptions more repulsive to the eye than serious in their nature." These points Dr. Creighton deals with *seriatim*. He points out that Corlbut and Bernard, supposed to be of British nationality, gave about 1,800 first hand observations of unmistakable leprosy, but the probability is that these observations were made abroad. He illustrates the utter confusion existing throughout the whole medieval period between true leprosy, *lues venerea*, and other affections. "*Lepra* was a term used in a generic sense, because of a real uncertainty in diagnosis, or because there was some advantage to be got from being called *leprosus*, or because it was flung about at random" as a term of reproach, or because a halo of morbid exaggeration surrounded the idea of "leprosy" in the medieval religious mind (*pauperes Christi*). There is no difficulty in producing evidence from medieval English records of the prevalence of *lues venerea*, and probably much of the *lepra Normannorum* was of this nature. In a most interesting examination of the character of the English, Scotch and Irish leper-houses Dr. Creighton shows "that the endowed hospitals of medieval England were in no exclusive sense leper-hospitals, but a general provision, under religious discipline, for the infirm and sick poor, for infirm and ailing monks and clergy, and here or there for decayed gentlefolk." "Thus our doubts as to the amount of true leprosy that once existed in England, and was provided for in the access of chivalrous sentiment that came upon Christendom in the twelfth and thirteenth centuries, tend to multiply in a compound ratio. We doubt whether many of the so-called leper-houses or lazarett-houses in the list of one hundred, more or less, that may be compiled from the *Monasticon*, were not ordinary refuges for the sick and infirm poor, like the three or four hundred other religious charities of the country. We know that, in some instances of leper-hospitals with authentic charters, the provision for the leprosy was in the proportion of one to three or four of non-leprosy inmates. We know that as early as the end of the thirteenth century the *leprosi* were disappearing or getting displaced even from hospitals where the intentions of the founder were explicit. And lastly, we doubt the homogeneity of the disease called *lepra* and of the class called *leprosi*." Nevertheless, Dr. Creighton concludes that "the convergence of probabilities does point to a real prevalence of leprosy in medieval England," though, as he adds, a vigorous scepticism might be justified, by the absence of any good diagnostic evidence, in questioning its frequency.

T. C. F.

THERAPEUTIC NOTES.

THE TREATMENT OF FRECKLES, VITILIGO AND CHLOASMA.

(Corres. Blatt. f. Schweiz. Aertz. 1892. No. 18, p. 422.)

DR. SAALFELD warmly recommends the following measures for the destruction of the superficial layers of the skin and the removal of pigment. The affected parts are covered with compresses soaked in a 1% solution of corrosive sublimate in a mixture of equal parts of alcohol and water; they may be applied and kept moist for four hours, when bullæ will have formed. These must be opened with care and dusted with some inert powder. In about a week dermatitis entirely subsides, and the newly-formed skin is pale and unpigmented.

An equally efficacious and less severe measure consists in the application every night of ointments containing sulphur (80 to 50 per cent.) or caustic soda (3 to 5 per cent.) until a moderate dermatitis is produced. For the same purpose the following formulas are given :—

R Hydrarg. Ammoniat.					
Bismuthi subnitr. ...	...	...	...	...	aa partes 2½
Olei olivæ ...	...	...	...	...	partem 1
Ung. glycerinat. ...	...	...	...	...	partes 4
and R Naphthol β ...	...	...	...	...	partes 5-10
Zinci oxidi					
Pulv. amyli ...	...	...	...	...	aa partes 12½
Vaselinum ...	...	...	...	...	ad partes 50

The fact that the changes brought about by these measures are of short persistence appears to the writer to be unworthy of mention.

TREATMENT OF ACNE VULGARIS. (Rev. de Clin. et de Therap., 1892.)

DR. RENAULT describes in detail the management of this disease, which he divides into three types. In *mild* cases he advises dabbing the face lightly with water previously boiled and allowed to become as warm as the patient can stand, the sponge used having previously been kept in a 1 per cent. solution of corrosive sublimate. This ought to be practised night and morning and sponge used always kept in a weak sublimate solution. In *moderate* cases the use of sulphur ointments (1-10) at night is recommended, or the painting of the face at night with salicylic acid (10 parts), or iodoform (4 parts) in thirty of ether. In *severe* cases, where comedones and pustules are abundant, and there is much induration, R. advocates the rubbing of the face with black potash soap at bedtime for several nights, leaving the lather on till the morning, when it may be washed off with warm water and the face

powdered with starch. Usually the skin will be irritated to the proper degree in about five days, after which emollients ought to be substituted. Such are bran-starch- or mallow-water with one-third their amount of a 20 per cent. solution of boric acid, and they may be applied as sprays to the part, which must afterwards be carefully dried and dusted with starch. These methods must be employed alternately for five or six weeks, after which merely a certain amount of erythema remains. For this the following formula, used by Besnier, is recommended :—

R Sulphur precip.	} mixed in water	} āā partes equales.
Glycerini		
Alcohol Camphorat.		
Aq. Rosæ		

Sig.—To be applied at bedtime with a brush and allowed to remain on all night. If the indurated nodules resist these methods of treatment recourse must be had to surgical measures. The best of these are (1) Destruction with very fine thermo-cautery, or (2) The linear scarifications as practised by Vidal in lupus. The importance of general medication must not be lost sight of.

OINTMENT FOR CHILBLAINS. (*Union Médicale and Journ. de Mal. Cutan.*, November, 1892.)

R Menthol	...	...	...	...	0 gr. 75
Salol	...	...	...	...	1 gr. 50
Ol. oliv.	...	...	...	...	15 gr.
Lanolin	...	...	...	...	45 gr. Ft. Ung.

The first application diminishes pain and softens the skin. Afterwards rhagades disappear if the ointment is applied regularly once or twice a day.

OINTMENT FOR CHRONIC URTICARIA IN CHILDREN. (*Union Médic. and Journ. de Mal. Cutan.*, November, 1892.)

R Chloral Hydrat.	...	...	...	} partes 1½.
Camphor. pulv....	...	...	...
Gum arabic pulv.	...	...	...
Ung. cetacei	...	...	...	partes 10.

The three first ingredients must be triturated till complete liquefaction takes place, then the spermaceti ointment added. The inunction of this ointment at night over the seat of the nettle-rash often diminishes itching and procures sleep.

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LYMPHANGIOMA CIRCUMSCRIPTUM CUTIS.

BY ALFRED G. FRANCIS, B.A. (CANTAB.), M.B., B.S. (LOND.), F.R.C.S.

(*Conclusion.*)

*Group III.—Hæmatolymphangioma:—*The affinity of the capillary blood-vessels to the capillary lymphatics is a very close one; arising in the same embryonic area by a practically identical process, they possess in their fully developed state a very similar structure: besides this they are both very closely connected on the one hand with each other, and on the other with the fixed connective tissue corpuscles in their immediate neighbourhood, and their distribution in the tissues and mode of development in newly-formed tissues is practically the same; as in addition to this they are very closely connected physiologically in the work of irrigating the tissues with nutrient material, we should on theoretical grounds expect that any agent acting on the one system would also affect in a somewhat similar manner the other, and it might be readily imagined that any cause arising either in embryonic life or subsequent to birth, which would tend to cause angioblastic processes in the blood-vessels, would also with certain modifications produce similar changes in the lymphatics: we have here principally to do with such processes, and the evidence as to the truth of such purely theoretical suppositions is conclusive and has been frequently demonstrated, both clinically and anatomically. Hoggan thought that venous and lymphatic nævi were generally co-existent, but that from its want of colour the lymphatic element was overlooked. Wegner also described mixed cases (hæmatolymphangioma).

giomata) ; the clinical evidence is very strong, whether we regard the more generalized forms of lymphangioma (*vide* Busey, Esmarch and Kulenkampff and others), or confine our attention to the very limited group under consideration : when, however, we study the minute anatomy of the disease the evidence is if anything still stronger, and Török has insisted on the co-existence of the two conditions in these cases.

I will, therefore, assume that hæmangioma and lymphangioma may not only occur in the same patient, but also in the same growth, and will include in the group of hæmatolymphangiomata those cases in which such conditions have been present, as far as one can judge from the published descriptions : but in all instances the relative amount of each element is not constant, and the appearance of the growths differs widely in accordance with the proportions present and the manner in which they are combined : thus one may have a nearly pure hæmangioma with a scanty amount of lymphangiomatous tissue mixed with it, or a nearly pure lymphangioma in which the hæmangioma is hardly represented, and between these two extremes is a gulf which is completely bridged over by a graduated series of cases : or, again, the two conditions may exist in a pure or nearly pure form in separate but adjacent growths, and be associated or not with other growths in which the two are variously blended. Of these various conditions examples are narrated below, and in accordance with the different amounts of the two varieties of angioma (hæmangioma and lymphangioma) present in the growths the following sub-groups are suggested.

Sub-group (a).—Various writers have described a change which occasionally may be observed to take place in hæmangioma of the skin or mucous membrane, consisting in the appearance of small translucent, wart-like prominences on the surface of a nævus, or of small cysts in its substance, which contain a clear fluid : these tend usually to increase and, *pari passu*, the nævus becomes paler and may finally be hardly recognizable as a blood-vascular growth. To this condition different names have been applied by authors, *e.g.*, “herpetic eruption on a nævus,” “wart-like degeneration of nævus,” “degenerated nævus,” “serous cysts in nævus,” “cystic nævus,” etc. These changes have by some writers been regarded as retrogressive, and due to more or less complete occlusion of portions of dilated blood-vessels, followed

by alterations in the contained blood ; this view is upheld by Besnier and Doyon* who quote in support of it the researches of Jacquet and Arragon,† and also by Smet and Bock‡ when considering the cases included in sub-group (b) and (c). My friend Mr. A. A. Bowlby has recently investigated a series of these peculiar nævi from the tongue, and has informed me that he is of opinion that the translucent cysts are lymphatic: this view receives confirmation from the cases recorded below (especially Köbner's, and Cases IV. and VII.), in which typical lymphangiomata occur side by side with "degenerated nævi."§ It therefore seems more reasonable to consider that we have originally a mixed hæmatolymphangioma and that the hæmangiomatous part undergoes retrogression, while the lymphangiomatous part proceeds to further development, with formation of varicosities, small cysts, etc. ; such a retrogression of a pure hæmangioma is very common, and the post-genital appearance and progressive growth of a lymphangioma is also well known, and is well illustrated by the cases related below ; but in these "degenerated nævi" these two changes take place together on a limited area and have probably a very intimate connection with each other: the difficulty in determining whether these small cysts are lymphatic or not is increased when hæmorrhage takes place into these small cavities, or small blood-vessels are found connected with them either by accidental rupture or by angioblasts forming a new channel between a capillary lymphatic and a capillary blood-vessel. The history also of angiokeratoma emphasizes this point, for Dr. T. Colcott Fox|| considered his cases originally as lymphangiectasis, but subsequently agreed with Török¶ that the cavities were blood-vascular and the cases really examples of *Angiokeratoma* (Mibelli). However, Mibelli** himself refers to dilated lymph-spaces in his own case, and Pringle†† considers that in this disease it is possible that the two

* *Loc. cit.*, vol. ii., p. 874.

† Arragon, "Angiomes des muqueuses," *Archiv. gén. de Physiol.*, 1888, p. 351.

‡ Quoted from Török's later paper.

§ Lannelongue and Ménard, "Affections congénitales," I., p. 623, make a similar statement.

|| Colcott Fox, *loc. cit.*

¶ Török, *loc. cit.*

** Mibelli, "International Atlas of Rare Skin Diseases," No. II., 1889.

†† Pringle, "On Angiokeratoma," *The British Journal of Dermatology*, 1891, vol. iii., Nos. 8, 9, and 10.

morbid conditions may be associated. Török* considers the case recorded by Thibierge and No. 3 as forming connecting links between the hæmatolymphangiomata of sub-groups (b) and (c) and angiokeratoma. Besnier and Doyon† include them in the group of hæmatangioma, with the cases of Schmidt, Noyes and Török, and one of their own (sub-group b, No. 3), but the three latter cases are far more comparable with those included in the next sub-group.

Sub-group (b).—I propose to include in this sub-group those cases in which the original growth is a well-defined hæmangioma, but is subsequently associated with lymphangioma, or in which well-defined hæmangioma co-exists with lymphangioma; this separation is a purely artificial one, as the difference between the members of this and the preceding and succeeding sub-groups seems to be one of degree rather than of kind. However, it was suggested by Mr. Jonathan Hutchinson,‡ and has, at least, a clinical value.

1. *The case of Drs. Tilbury and T. Colcott Fox*§:—T. W., male, ætat. 21 years. Born in Mauritius, of English parents, but in England since six years of age. At birth had two large "port wine-coloured" nævi on left thigh, which persist unchanged.

At six months of age, the veins of left calf began to enlarge.

At two years, a number of little "warty" growths appeared on skin of left buttock, flexor surface of left knee, and left half of peri-anal region, on quite distinct areas to those occupied by the nævi; at the same time he had an attack of fever, which left him very prostrate for six months, the "warty places" being tender for some time.

At seven, eleven, fifteen, and nineteen years, he had similar attacks, which greatly debilitated him for three to six months; on each occasion the skin affection became worse, the "warts" enlarging and becoming more vesicular in appearance.

There is no history of inguinal adenitis; in the attacks at seven and eleven an abscess formed in the median line between the buttocks.

In addition to the febrile attacks he has had two mild attacks of lymphatic inflammation of the dorsal part of the left foot within the last year, as if an abscess were going to form, subsiding with fomentations.

From time to time tiny "warts" and spots have appeared about the back of the limb; the latter are at first livid in colour, and gradually fade to a duller

* Török, *Monatshefte für Prakt. Derm.*, Bd. xiv. No. 5, March, 1892.

† Besnier and Doyon, *loc. cit.*, p. 278.

‡ Hutchinson, *Archives of Surgery*, April, 1890, Vol. i., No. 4. Plate xvi.

§ T. Fox and T. Colcott Fox. "On a Case of Lymphangiectodes," *Path. Soc. Trans.*, vol. xxx., p. 470; and additional notes on the histology, with plate, by Hoggan, *loc. cit.*, and also Török, *loc. cit.*; additional note on subsequent condition of patient, by T. Colcott Fox, *loc. cit.*

hue; these fresh appearances are not noticed by him to occur in connection with any marked febrile attacks.

Present Condition.—Intelligent, highly neurotic; dark complexion, black hair and eyes. The disease was limited to the back of left lower extremity, the rest of the body surface being quite healthy. *Nævi*, one on left buttock, 6×1 inches in dimension, extending from slightly above trochanter to a little below the fold of the nates ("port-wine mark"); another similar *nævus* is below this, and rather external to the middle line of the thigh, reaching from the middle of thigh to the back of knee-joint, varying in width from one to three inches; the three outer toes are similarly affected. Enlarged veins exist on the lower part of scrotum; there are no degenerative changes in the above, which are congenital. There are enlarged veins on the back of thigh, and especially on the back of calf, and on outer side of latter is a cavernous, venous swelling, one inch in diameter, reducible on pressure, and filling again when pressure is removed; this arose subsequent to birth, and has no apparent connection with the "warts." Over the inner aspect of middle third of back of left thigh are collections of little raised blood-vascular points, the size of pins'-heads, looking like hæmorrhages; they pass through various stages, first red, then purplish, then pale, and some finally disappear; they do not become vesicular, but in some parts are intimately mixed up with the vesicular growths.

The "*warts*" are situated between the buttocks, extending from the base of the coccyx to the front of the anus, more externally also over the left gluteus maximus, and over the left popliteal space; not continuous from one region to another, but in isolated irregular raised patches, looking at a distance like warty growths, but more closely like heaped-up frogs' spawn. The youngest patches are made up of a multitude of distinct flattish papule-like growths, aggregated into masses, each item of the mass looking like a tiny sessile pale pink wart, not bigger than a very small pin's-head, with a vesicular centre; the older and larger patches are raised into irregular masses as much as half an inch above the surface; about the anus the growths are most irregular and elevated like moderately exuberant condylomata; in some places the older growths are mixed with tiny dilated vesicles; in the popliteal space the growths are smaller than the peri-anal ones, about the size of mulberries. At the lower fold of the nates the patch is raised half an inch in the centre, and is the size of the palm of the hand. Some of the cyst-like formations may reach the size of a pea.

On puncture of the vesicles, a clear watery fluid exudes, containing a few lymph-corpuscles, but no blood-corpuscles.

The growths are unaffected by pressure. No enlarged glands are to be found, and the skin around the *nævi* and "*warts*" is healthy.

The left limb is not appreciably larger than the right; Dr. T. Colcott Fox subsequently stated that there had been steady increase in the size of the limb.

2.—*Case of Besnier and Doyon*.^{*}—Male, of English race, from Mauritius. At birth he had an ordinary *nævus* in the left pre-axillary region of the thorax—the situation now occupied by the lesion. Subsequently he sustained some inflammatory attacks of "*erysipelas*," which were repeated many times a year, even after his arrival in Europe. There is no history of lymphatic glandular enlarge-

^{*} Besnier and Doyon, *loc. cit.*, vol. ii., p. 880. With two models, taken at a year's interval in the Musée de St. Louis, by Baretta. Nos. 1,466 and 1,532.

ment during the attacks, and there was none in the interval when the patient was under observation.

The principal lymphangiomatous surface is nearly the size of a hand, but is supported on a tumefied plaque, which is of the natural colour of the skin, firm on pressure, and passing insensibly at the periphery into healthy tissue, forming at the centre a thick mass projecting 2-3 cm. from the surface (*pachydermie souslymphangiomateuse*).

The naked eye appearances agree completely with those depicted by Malcolm Morris (*infra*), except that they have a little less colour. Besnier and Doyon describe the disease from their own case as follows:—"The lesions are limited, and consist of more or less coherent groups of eruptive elements, isolated or conglomerated into mulberry-like masses, forming a finely frambæsioid surface, which consists of colonies of little miliary—rarely pea-like—elements, which are reddish or yellowish-red, more or less opaque at the base, pointed at their summits, which are transparent, or sometimes translucent, like a little grain of sago imperfectly soaked (dysidrosis-like). Some elements or islets may be blackish—accidentally hæmorrhagic, some predominate in volume, forming little warty conglomerations, papule-like, with venous teleangiectasis; around the principal conglomeration detached islets always exist, and more or less abundant isolated elements."

Puncture allows the escape of clear serous fluid with lymph-corpuscles, and without blood, unless blood-vessels are ruptured. When fasting, the leucocytes are scanty, and neither the blood from the wound nor from the finger showed leucocytosis, or filaria embryos, even when examined at 11.45 p.m. by Darier.

8.—*Case of Besnier and Doyon*. *—Young woman. Lesion was situated on gluteal region, and commenced in infancy.

The principal mass was the size of the palm of the hand, and composed of uniform "granulations," firm, resisting, and very imperfectly reducible by pressure.

It commenced as purple points, and the ultimate development tended to the formation of little tumours, some blackish, some yellowish, almost transparent, allowing the escape when punctured of only blood or a little serous fluid.

It was cured by puncture-cauterization with the galvanic cautery.

4.—*Case of J. Hutchinson, Senr.* †—Female, ætät 18 years. Lesion situated in upper right mammary region, especially near the axilla.

In early childhood something resembling a nævus or port-wine stain was noticed at the seat of disease, although nothing abnormal was noticed at birth; this was excised in childhood, and the scar remains near the anterior axillary fold.

After the operation little lymphatic warts began to increase in number, and extended over the upper part of breast, consisting of groups of clustered and isolated vesicles.

The vesicles had firm walls and contained lymph, and near and sometimes on them, were tufts of dilated capillaries, not emptied by pressure. Some of them were almost black, others brown, like grains of cayenne pepper.

The eruption was liable to excoriate and bleed.

The disease was treated with the actual cautery; and the acid nitrate of mercury was applied to lymph-vesicles, which showed a strong tendency to recur during the next six weeks.

* Besnier and Doyon, *loc. cit.*, vol. ii., pages 874, 875.

† Hutchinson, *Archives of Surgery*, vol. iv., No. 13, July 1892, p. 75, and plate 78.

When seen eighteen months later, it was found that there had been no return of the vesicles, but there were about half a dozen little "cayenne-pepper grains," and the acid nitrate of mercury was applied to these.

5.—*Case of T. Colcott Fox*.*—In 1885 a boy was under the care of Dr. Fox, on whose leg was a congenital band of confluent vesicles and papules, like frogs' spawn, the whole way down the limb; in addition there were capillary venous *taches* and large dilated veins.†

6.—*Case of Köbner*.‡—Male, ætat. 21. Badly nourished, with slight lordosis and scoliosis, with some atrophy of the muscles of the left arm and left leg.

At birth the patient was affected with a tumour on the extensor side of the left arm.

The veins from the middle of the arm down to the back of the hand are dilated. Some cavernous angiomas and a number of fibromata are present, and on the nerves of the left brachial plexus multiple painful neuromata are to be felt.

There are also small groups of vesicles of a herpetiform appearance, some localized on the border and surface of a hæmangioma, others are found on small brownish and quite superficially thickened patches, others again on perfectly normal skin.

The vesicles are translucent and correspond to the ampulla-shaped dilatations of the lymphatic capillaries.

The extensor side of the left forearm and hand are provided more abundantly with hair than those of the other side; this side sweats more easily, and the temperature is about one degree higher than on the other side.

7.—*Case IV. (supra)*.

8.—*Case VII. (supra)*.

9.—*Case VIII. (supra)*.

In these nine cases, the skin lesions (except that in some cases there is a marked amount of hæmangiomatous tissue), closely resemble those seen in some of the next sub-group, but some of them are interesting in that they serve to connect the circumscribed lymphangioma of the skin with more generalized forms of lymphangioma, *e.g.*, the cases of Drs. Tilbury and Colcott Fox, and Köbner where the lesions were distributed over nearly the whole limb; the wide distribution of the hæmangiomas, some of which were cavernous, the enlarged veins, and in the former case the subsequent enlargement of the whole limb, seem to show that they were only the extreme members of the series of congenital cases of so-called nævoid elephantiasis, or teleangiectatic hypertrophy, many examples of which are recorded by Busey and Esmarch and Kulenkampff, but in these two the lesions were for the main part, at

* T. Colcott Fox, *loc. cit.*, p. 75.

† I find that Elliot (*Med. Rec.*, 1891, p. 561) has recorded a very similar case.

‡ Köbner, *Verhandlung d. Berliner Med. Gesellschaft*, 1888, p. 189; and *Annales de Dermat. et de Syph.*, vol. v., 1884, p. 293 (quoted from Török, *loc. cit.*).

any rate at first, confined to the skin. In Köbner's case, the neuromata of the brachial plexus and the scattered fibromata connect it with the remarkable case of Czerny,* in which neuromata were found on the nerves of the lumbar plexus associated with fibromata and cavernous lymphangiomata, and that of Kaposi;† it is also interesting to note the occurrence, side by side of nævi, "degenerated nævi," and typical lymphangioma.

In Besnier's and Doyon's case (2), and in Köbner's (6), the existence of the pachydermatous plaque is interesting, as it thus forms a link between the cases included in sub-groups (b) and (c), and the cases of pachydermia associated with lymphangioma alone. (Cp. Case III.)

Case IV. connects this group with those cases of lymphangiomata affecting principally the subcutaneous tissue, but associated with lymphangioma of the superjacent skin; for, on removal, the subcutaneous tissue showed evidence of a slight degree of varicose or cavernous lymphangioma. Of these more extensive lymphangiomata with varicose lymphangioma of the skin over them Busey has collected several cases.

I have included Besnier and Doyon's case (8) here, as it seems more allied to these cases than to angiokeratoma, with which they class it, but the whole case turns on the real origin of the clear cysts, to which point I have referred before.

Sub-group (c).—I would include in this group those cases of lymphangioma of the skin in which the only naked-eye evidence of hæmangioma consists in dilated tufts or striæ of capillary blood-vessels, in some of which thrombosis has occurred, or small hæmorrhages into the cysts; these appearances are seen in addition to the larger nævi in most of the cases of the preceding sub-group, but here they occur alone; it is probable that they are minute hæmangiomata, and not simply teleangiectases. The abundance and distribution of the tufts vary very considerably. Most of the cases are very much alike as far as the appearance of the lesions is concerned, but they have received a variety of names from those who have described them *e.g.*, *lupus lymphaticus* (Jonathan Hutchinson, Senior and Junior);

* Czerny, "Archiv. für Klinische Chirurgie," vol. xvii., p. 357. (Quoted from Busey.)

† *Loc. cit.*, vol. ii., p. 127.

Lymphangiectodes (Radcliffe Crocker); *Pseudo-lymphangioma*, *Hæmatangioma* (No. 25); *Cavernous lymphangioma* (Besnier and Doyon); *Lymphangioma circumscriptum* (Malcolm Morris); *Lymphangioma capillare varicosum* (Noyes and Török); *Angiome kystique* (Smet and Bock).

10.—*Case of J. Hutchinson, Sen.**—F. G., male, ætat. 10 years. Health always good. Disease commenced at age of 9 years as a little wart on the middle of the chin, from this the disease spread slowly.

Present Condition.—In middle of chin is a patch, the size of a penny, of coalesced clusters of small papules, looking like low warts. Many of the little eminences are translucent, and contain fluid; when pricked this escapes, and after emptying they are filled with blood. The apices of the little papules are speckled over with tufts, most of them bright red in colour, and others purple, giving a decided bright mottling, almost strawberry-like, to the whole patch; with a lens they were seen to consist of tufts of capillaries, some too small to be seen with the naked eye. The patches were liable to attacks of erysipelatous inflammation (*vide* "Archives of Surgery"). The patch was partly excised, partly treated with nitric acid, partly with the actual cautery; it showed remarkable resistance to treatment, and where not wholly destroyed reproduction took place.

11.—*Case of Jonathan Hutchinson, Sen.*†—P. H., male, ætat. 7 years. Had a fever at three years of age, and this eruption appeared afterwards. The patches were liable to attacks of erysipelatous inflammation (*vide* "Archives of Surgery").

The disease consists of a patch about the size of the palm on the left shoulder, and is composed of clusters of spots, some isolated, others aggregated and confluent.

Some of the clusters are rounded, others very irregular, and all consist of pale spots the size of pins'-heads, slightly raised; many look translucent, a few blood-stained. In many minute hæmorrhages had taken place; in some tufts of vessels were seen, in which, for the most part, coagulation had apparently occurred. On pricking the vesicular spots clear fluid escaped. There were no papillary out-growths; the skin between the growths was pale and the surrounding skin healthy, and the eruption was very uniform, varying chiefly in the presence or absence of capillary tufts of vessels. There was no change in the two years during which he was under observation, except that some smaller patches had ceased to show vesicles, and had become flat and somewhat polished.

12.—*Case of Jonathan Hutchinson, Sen.*—Crocker‡ refers to an unpublished case of Hutchinson's, in which nearly all the vesicles had vascular tufts obscuring the vesicular character.

* J. Hutchinson, Sen., "On a peculiar Papulo-vesicular Eruption (Lupus lymphaticus)," *Path. Soc. Trans.*, vol. xxxi., 1890, p. 342. With two coloured plates; and microscopical account by Sangster, with two plates; and "Archives of Surgery," vol. i., No. 4, April 1890, plate xv.; and "International Atlas of Rare Skin Diseases," plate i.

† J. Hutchinson, Sen., *Path. Soc. Trans.* and "Archives of Surgery," and "International Atlas of Rare Skin Diseases," *loc. cit.*

‡ Crocker, "Diseases of the Skin," first edition, p. 503.

18.—*Case of Jonathan Hutchinson, Sen.**—Male, ætat. 17 years. Eruption has been present several years, spreading at the borders and by the production of satellites.

It consists of a patch over the left lower scapular region and adjacent part of axillary border of arm. (The patch is very similar in appearance to that of Morris.)

There have been several attacks of a sort of erysipelatous swelling of the affected region recently.

14.—*J. Hutchinson, Sen.,†* mentions that he has also seen a case in which the disease had only been present for a few years, where the patient was a lady, ætat. 50 years.

15.—*J. Hutchinson, Jun.‡*—Man, ætat. 19, healthy-looking. Disease had existed five years.

The appearance of the disease was very similar to that recorded by J. Hutchinson, Sen. (11), and was also on the shoulder.

The growth was excised. Recovery was protracted owing to an attack of erysipelas.

16.—*Case of Malcolm Morris.§*—D. W., female, ætat. 7 years. Delicate, fair complexion. Several of family died of phthisis. Disease appeared when four months of age, as a group of vesicles in the left scapular region. The disease had spread slowly since, and had caused little inconvenience.

There had never been any erysipelas or lymphangitis (*vide* Besnier and Doyon, *loc. cit.*, p. 381).

Over the upper part of the left trapezius is a patch, extending from the fourth cervical vertebra to within an inch of the acromion process, consisting of clusters of vesicles, superficially resembling warts; upon their apices and between them are tufts of injected capillaries, which give a mottled appearance to the eruption. Close by the main patch are some small discrete groups of similar vesicles. The vesicles, when pricked, allow the escape of clear albuminous fluid. The patient died of diphtheria.

17.—Case V.

18.—Case VI.

19.—*Case of Hayes.||*—Female, child. The disease was situated on the left side of the nape, and closely resembled the other cases of this group.

20, 21.—*Crocker's Cases,¶* two in number, one female, one male. In one the disease was on the left side of neck, and began at age of six months.

The other over the left ribs, the growth being first noticed when 18 years of age.

* J. Hutchinson, Sen., "Illustrations of Clinical Surgery," vol. ii., p. 149, plate lxxxvi.; and "Archives of Surgery," vol. i., No. 4, April 1890, plate xvi.; and "International Atlas of Rare Skin Diseases," plate i.

† J. Hutchinson, Sen., "Illustrations of Clin. Surgery," *loc. cit.*

‡ J. Hutchinson, Jun., *Path. Soc. Trans.*, 1885, vol. xxxv., p. 467. With histology and plate.

§ Malcolm Morris, "Lymphangioma circumscriptum"; "International Atlas of Rare Skin Diseases," fasc. 1, plate i.

|| Hayes (unpublished case), referred to as "Hayes' Case" by Crocker, *loc. cit.*, and Morris, *loc. cit.*

¶ Crocker, *loc. cit.*

appearing on or near the scars produced by the removal during infancy of a congenital growth, which was not like the present disease, but, judging from the scars, there were several growths.

In one of the cases, but which is not stated, the greater part had been destroyed by caustics a year before, but many fresh growths had appeared on and around the scars of previous operations. Electrolysis was tried with a satisfactory result up to a month afterwards, but there was partial recurrence three years later.

22.—*Stewart's Case.**—Female, ætat. 19 years. The distribution of the disease was over a lumbar nerve on the left side, and partly vesicular, partly vascular, and was of two years' duration. The vesicles were in clusters, varying in size from minute specks to patches of more than an inch square. In the patches the vesicles were often so closely packed together as almost to seem confluent, though they never actually coalesced. The vesicles varied from the size of a pin's-head to that of a pea, and were not unlike herpetic vesicles on a very vascular base; some contained sanguineous fluid, from which red blood-corpuscles and hæmatin crystals were obtained, and some, serous fluid containing leucocytes. The older patches had a slightly raised base, with vesicles on the surface; in another part the vesicles were replaced by dark hæmorrhagic dots, around which could be seen a network of enlarged capillaries.

(23.) *Jamieson's Case.†*—Male, ætat. 8 years. The disease was first noticed when a few months old, and was situated on the right shoulder, extending inwards for about three inches.

It consists of a cluster of vesicles, closely aggregated together, having a somewhat warty aspect, the vesicles being not unlike those of herpes.

Fresh ones have come out from time to time, while others have vanished, leaving no trace. There was at one time a group nearer the spine.

Running over several are vascular tufts or striæ. The vesicles have very resistant walls, and are evidently deeply seated.

24.—*Jamieson's Case.‡*—On the face of an elderly woman, appearing late in life.

25.—*Case of Noyes and Török.§*—Female, ætat. 10½ years. There was no phthisis or skin affection in the family.

The disease began at the age of three years, as a single spot on the left side of the neck, looking like a blister. Shortly after similar spots sprang up, becoming gradually larger, so that some attained the size of a small pea. These formed patches of a somewhat irregular appearance and dirty colour, looking like a collection of flat warts; other small accessory patches formed later in the neighbourhood of the nævus, some of them, becoming confluent, forming small groups, looking like the principal groups, but smaller. Each patch spread out gradually at its base till it became united with the neighbouring spots, other smaller spots springing up continually near it. The disease increased slowly.

Present Condition.—The disease is situated on the left side of the neck, and extends from the border of the scalp obliquely downwards as far as the seventh

* Stewart, "A Peculiar Form of Skin Disease," *Australian Medical Journal*, 1880, n.s., ii. p. 113; and T. Colcott Fox, in Bulkley's "Archives of Dermatology," vol. vii., 1881, p. 85.

† Jamieson, "Diseases of the Skin," Third Edition, p. 160.

‡ Jamieson, *loc. cit.*

§ Noyes and Török, *loc. cit.*

cervical vertebra, consisting of a patch the size of a child's hand, and of clear vesicular nodules, varying from a pin's-head to half a pea.

The large spot is rather oval, with very uneven surface, raised at the centre about one-sixth of an inch above the level of the surrounding skin, and consisting of vesicular nodules standing close together, and kept apart from one another by their interstitial walls. The vesicles are covered by the whole thickness of the epidermis and look warty in places; in others vesicular with opalescent vesicles. Small capillaries run over the surface of a few of the clear vesicles, as points or streaks. Sometimes a vesicle contains only a single one, sometimes two or three, and in a few instances several capillaries are found, so that it gives one the impression as though a minute *nævus araneus* had developed on the surface. On some spots the vesicles have assumed a blue-red colour, and look as if an extravasation of venous blood had taken place into the small cavities. At a few places are a few blood-crusts, due to scratching. The vesicles are unchanged by pressure; on puncture they discharge a clear watery alkaline fluid. There is no trace of a previous erysipelatous inflammation on or in the neighbourhood of the affected area, and no trace of oedema. The disease has caused the patient no inconvenience at any time.

Sub-group (d).—I would include in this sub-group those cases which, from the microscopical evidence, seem to be hæmatolymphangioma, but which, to the naked eye, appear free from hæmangioma *en masse*, or in the form of capillary tufts, but may present an increased amount of redness or excess of pigmentation in the affected area.

26.—Case I.

27.—Case II.

28.—*Schmidt's Case*.^{*}—Female, ætat. 17 years, healthy. The disease commenced when a young child, as three small vesicles, which slowly increased in the course of years, but now remain stationary.

On the left thigh, over the position of the sartorius, are twelve or thirteen wart-like prominences, some isolated, others arranged in groups; brown in colour, and varying in size from a pin's-head to a lentil, of firm consistency. The skin around is normal. There are no dilated vessels or oedema, and no enlargement of the inguinal glands.

On puncture a very small amount of serous fluid escapes; excision of the largest was followed by the escape of abundant quantity of clear, slightly yellow-coloured, somewhat glutinous liquid, but little blood. The remaining vesicles were destroyed with the thermo-cantery.

These twenty-eight cases form a series sufficiently large to enable one to construct a fairly average clinical account, though in many the details are very incomplete, and in only a few is there a satisfactory microscopical description. I have not been able to see an account of the cases described by Smet and Bock, and by Thibierge.

^{*} A. Schmidt, "Archives f. Derm. und Syph.," 1890, p. 529, abstracted in *The British Journal of Dermatology*, vol. iv., No. 4, April 1892.

Sex.—Of twenty-six cases where the sex was mentioned, fourteen were females and twelve males.

Date of Appearance of Disease.—This is not definitely given in every case. Of those cases in which the first lesion was a hæmangioma, this was always congenital, except in Hutchinson's case (No. 4), and the lymphangioma appeared subsequently. All the patients were under twenty-one years of age except Hutchinson's (No. 14) and Jamieson's (No. 24), and in these two cases the disease started late in life. In the others the date of appearance was given as follows: "congenital" (2 cases), 3 days, 2 months, 4 months, 6 months, "few months," "in infancy," "disease present nearly whole of life," childhood (2 cases), 2 years, 3 years (2 cases), $5\frac{1}{2}$ years (?), 9 years, about 12 years, 13 years, 14 years, 17 years, and in one patient of the age of seventeen it had been present "several years."

Situation.—This is stated in twenty-six cases, as follows:—

Face, 1; chin, 1; left side of back of neck, 3.

Shoulder, 1; right shoulder, 1; over left trapezius, 1; outer side of left shoulder (deltoid region), 1; left lower scapular region and axillary border of arm, 1.

Left axilla over ribs, 2; right axilla and upper right arm, 1; left arm, 1; left præ-axillary region, 1; right upper mammary region, 1; left tenth intercostal space, 1; over left number nerve, 1.

Left gluteal, intergluteal and popliteal regions, with hæmangiomata &c., also over back of whole left lower limb, 1; gluteal region, 1; both gluteal and intergluteal regions and upper part of back of both thighs, especially on right side, 1; thigh, 1; inner left thigh, 1; outer side of left thigh, 1; leg and thigh, 1; right leg and thigh on inner side, 1.

So that though the distribution is a wide one, yet the favourite localities appear to be the neighbourhood of the upper portions of both upper and lower limbs; but in twenty-one instances in which the side of the body was specified, the disease occurred fifteen times on the left side, four times on the right side, and in one case the disease was median (No. 10), and in one affected both sides, but the right side especially (Case I.).

Mode of Arrangement of Patches.—The disease may be (i.) limited to a more or less circular area of small dimensions, as in the majority of the cases, or (ii.) be arranged in the form of a band or streak.

This seems more exceptional, but occurs in a marked manner in No. 5 and Cases II. and VII., in a less marked degree in cases IV., VI. and Nos. 22 and 23, and in a broken form in No. 1, to which Case I. is somewhat similar. The explanation of this streak-like arrangement is not quite clear, and some relation to nervous or vascular trunks suggests itself. The distribution over nerve trunks is fairly precise in some of the cases, *e.g.*, Case VII. over the external cutaneous nerve, Case IV. over the tenth intercostal nerve, Case VI. over the intercosto-humeral nerve, No. 22 over a lumbar nerve, No. 1 and Case I. over the small sciatic nerve. In some of the other cases there seems also a tendency for the affected area to be elongated in one direction, and the lesion in some cases to be limited to the surface supplied by one cutaneous nerve branch. But the part played by the nervous system in the etiology of the disease is obscure, and with the exception of a few facts such as the occurrence of lymphangiomata in areas supplied by nerve trunks affected with neuromata (Köbner, Kaposi, Czerny), and the statement of Hoggan, that in his case there was absence of the sub-epidermic nerve plexus, and increase of the cells of Langerhans, which he regards as nervous in nature, we have little evidence of morbid conditions of the nerves in the disease. But the consideration of other diseases in which lymphatic oedema or overgrowth of cutaneous or other tissues are associated with lesions of the central or peripheral nervous system, and especially of such diseases as neuropathic papilloma, suggests that overgrowth of vascular tissues may be, at any rate, partly due to some disturbance of nervous influence, but whether this be due, as suggested by different authors, to the influence of trophic nerves, or through the agency of the vasomotor nerves, or have its explanation in causes acting on the tissues of certain areas early in the development of the embryo, and affecting nerves and vessels alike, is a matter for future investigation. In some cases the distribution is over the main lymphatic trunks, and Case II. is a good example of this, whilst amongst Busey's collection of cases are several of the more generalized varieties of lymphangioma, where this point is emphasized. The arrangement of the individual growths is variable, but though in a few cases the growths were mainly small, and did not differ much in size, and were scattered more or less regularly over the affected area, yet in the majority there was a strong tendency towards the formation of one

or more larger patches surrounded by abundant smaller "satellite" growths; in some cases, indeed, the large patch reached the size of the palm of the hand, and the satellites were inconspicuous in comparison with it. The growth of the large patch is by lateral extension and coalescence of smaller patches, and subsequent extension by the formation of peripheral satellites, which in turn join with each other and the predominant mass.

Varieties of the Disease.—The cases narrated vary very much in the details of the growths that it is hardly possible to pen a description which may be applicable to many, though several of the cases in sub-group (c) are very much alike, and this variability depends very largely on the many possible combinations of the two varieties of angioma. But each of these present also many distinct conditions; *e.g.* :—

Hæmangioma may be present as : (1) port-wine mark, (2) ordinary capillary nævus, (3) venous cavernous nævus (Nos. 1 and 6), (4) cutaneous and subcutaneous phlebectasis, (5) minute capillary tufts, striæ, and dots, with or without thromboses and hæmorrhages, (6) small blood cysts, (7) increased vascularity without obvious enlargement of vessels.

Lymphangioma in all occurs as both *simple capillary* and *varicose capillary lymphangioma*, and in some a slight degree of *cystic* and *cavernous lymphangioma* occurs (*infra*). When in the simple form it escapes notice; and only when the other conditions are present does it become evident. These are later phases, and thus is readily explained the apparently late appearance of lymphangioma, whether associated with hæmangioma or not, though probably in the majority of cases it is congenital in origin. (1) The varices, small cysts and caverns form the "vesicles" so characteristic of the disease, which vary in size up to a pea, and in different cases have been likened to herpetic vesicles, sago grains, dysidrosis, and frog's spawn. They may occur isolated or variously grouped. (2) Small papules. (3) Small papules with vesicular summits, tending to become more vesicular as development proceeds. (4) Small papules, or papules with vesicular summits, or small vesicles tending to appear less vesicular as development proceeds, and finally associated with a varying amount of keratosis, and having thus an analogy in the development of angiokeratoma. (5) Associated with a certain amount of pachy-

dermia or localized elephantiasis. Probably this exists wherever the patch is much raised and thickened, and it is especially mentioned in Nos. 1, 2, 6, and 22. This serves to connect these cases with the more marked cases of lymphangiomatous pachydermia (group IV.). The small nipple-like processes and patches of atrophied skin which occurred in some of Busey's series of generalized lymphangioma are not well marked in any of these cases of circumscribed lymphangioma.

Progress of Disease.—As we have seen, the affection dates probably from embryonic life, and is made manifest by the enlargement of the lymphatic vessels of the growths subsequent to birth, during the early years of life. The ultimate result is at present not certain. In No. 1 we know that lymphatic œdema or elephantiasis occurred; and possibly this may be the termination of others, and the skin would thus be the first part obviously affected. In one case (No. 23) there is a statement that some of the growths disappeared, leaving no trace, and this is an important fact, but not mentioned by others. But in none of the descriptions does there seem to be any evidence that the growth spreads, leaving behind it a patch of atrophied, almost scar-like skin, as in lupus erythematosus.* The persistence and progression of the disease is interesting in comparison with the very common arrest of growth, or retrogression, and disappearance of many uncomplicated capillary hæmangiomata, and the co-existence of these two processes in “degenerated nævus” has been referred to. A point of interest in connection with the development and progression of the lymphangioma is the relation which irritation and injury have to them. An examination of the various sites occupied by the disease shows that it more frequently affects exposed parts, which are especially liable to friction and injury, and in one case (No. 11) the disease was ascribed to the friction of the boy's braces; and in some of the cases of lymphangioma, associated with marked pachydermia (*vide* Leistikow's case, mentioned in Török's paper and Case III.), some injury has been assigned as the cause for the development of the disease. This is emphasized by the results recorded of the effect of surgical interference in some of the cases collected in this paper; *e.g.*, Case I., the disease had been present nearly fourteen years, and was increasing very slowly until operated upon, and within five

* I find that Hartzell (*Medical News*, Jan. 16 1892) has recorded a case, where this actually occurred.

months there was a most extensive peripheral outburst of new growths. In No. 4, there was no evidence of the presence of lymphangioma until after the removal of a nœvus: this was followed by extensive development of lymphatic vesicles in the neighbourhood, and when these were treated by the actual cautery and caustics they showed a strong tendency to occur for six weeks. No. 10 is reported to have behaved in the same way, after similar treatment. In one of Crocker's cases also the vesicles appeared near the scars produced by the removal of a congenital tumour, and after the application of caustics many fresh growths appeared on and around the scars. In most of the cases operated on this was not noticed, and in the cases above the injury and accompanying inflammation may have caused a fresh outburst of lymphangioblastic processes, in much the same way that an acute dermatitis or cellulitis may become an important factor in the development of localized or generalized elephantiasis; or possibly the destruction of certain lymph-channels may have thrown more work on neighbouring ones, with resulting new formation and dilatation of lymphatic capillaries. A similar result has been seen in lymphangioma of the tongue. Maguire* and Winiwarter,† both mention an enlargement of a cystic hygroma of the neck, after removal of a tongue for macroglossia, and in both cases there was enlargement of the stump of the tongue after removal of the anterior third. In a case of macroglossia, I have seen great and rapid enlargement and outburst of superficial lymphatic vesicles after electrolysis, and in another, after removal of a V-shaped piece; while quite recently my friend Mr. Howlett showed at the Hull Branch of the British Medical Association, a case of elephantiasis mollis of the whole leg, which had rapidly developed after the removal of a subcutaneous lymphangioma of the back of the heel: these instances show that injury may be an important factor in the development or increase of lymphangiomata if a predisposition to lymphangioblastic processes exists.‡ Another interesting point to be noticed in connection with some of the cases, is the existence of *recurrent attacks of inflammation*, sometimes designated as "Erysipelas." These were well marked in Hoggan's case, and in Nos. 1, 2, 10, 11, 13, and in

* Maguire, *Journ. of Anat. and Phys.*, vol. xiv., 1879, p. 416.

† Winiwarter, *Langenbeck's Archiv.*, vol. xvi., p. 655.

‡ Lannelongue and Ménard, *loc. cit.*, give many additional instances.

No. 15, excision was followed by an attack of erysipelas; a less degree of the same thing was present in Case I., and in Cases II., IV., V., and VII., the growths were said to be sometimes rather tender: the absence of these inflammations is especially noted in Nos. 16 and 25. Besnier and Doyon, in commenting on this phase in their case (No. 2), state that a similar occurrence had only been noted in the case of T. and C. Fox (No. 1), and quote Malcolm Morris to the effect that he had not seen it in his own or any other case, or in medical literature, and they remark that the development by successive febrile attacks is similar to what occurs in elephantiasis; such febrile attacks are not uncommonly associated with generalized lymphangioma of every variety, and precede or accompany it, while in localized cases of lymphangioma they are also sometimes present; usually they have preceded the first appearance of the vesicles, and when recurring have caused a considerable increase in their size, but this is not invariable, and in Case I. especially such a relation was absent, both before and after operation. These attacks seem to be identical in nature with "elephantoid fever," and the "erysipelas," which when recurrent produces elephantiasis, but owing to the limited area affected are proportionately less severe: clinically they somewhat resemble erysipelas, but differ from it in the strict limitation to the part affected by the growth, but whether the inflammation is the cause of the increased formation and dilatation of the lymphatic capillaries or only a symptom seems uncertain, but the study of some of the less common and more aggravated forms of urticaria—which show that lymphatic oedema often most extensive, with very severe constitutional symptoms, and local symptoms so acute as to resemble erysipelas, may be entirely due to derangement of the vasomotor system,—lead one to believe that in this disease also the recurrent inflammatory attacks may be simply part of an extensive lymphangioblastic process, associated with fever and local inflammatory symptoms, and due to some deeper-lying cause acting through the agency of the vasomotor nerves; in those cases where extension is very slow, these attacks may be reduced to a minimum, and represented by occasional periods of tenderness, or may be quite absent. There seems to be no evidence of obstruction in the lymphatic trunks in any case, and where such obstruction seems to be an important factor in the etiology of generalized lymphangioma,

it is conceivable that it may act by causing increased tension in the lymphatic system, such tension acting as a direct incitement to the development of lymphangioblastic processes in the same way as injury, or any other cause. In the majority of the cases the extension of the disease was extremely slow, and in some appeared stationary, or nearly so, for some years. The treatment adopted in most of the cases was total destruction by excision, thermocautery, electrocautery, caustics or electrolysis, and all of these were ultimately satisfactory. The resulting scars presented nothing abnormal except in Case I. and Case IV., where they were somewhat keloid in character, although in the latter case the wound healed by first intention. Possibly the keloid scars occurring after burns and wounds associated with much dermatitis may in some cases be really instances of local elephantiasis, due to lymphatic obstruction or lymphangioblastic processes, as was probably the case in these two examples.

Influence of Race.—Malcolm Morris first pointed out that, with the exception of Köbner's case, all the examples of the disease had been recorded by British writers, and presumably had occurred in members of that nationality. This nearly exclusive possession of the disease seems to remain unaltered, except for the additional cases of Schmidt (No. 28), and Besnier and Doyon (No. 3), Smet and Bock, and Thibierge (quoted by Török); but whether this has any real significance, or is only due to the more frequent recognition of the disease in this country owing to the prominent position which has been assigned to it by Mr. Jonathan Hutchinson, Sen., who has had a series of several well-marked cases under his care, is a matter for future research.

Relation to Tuberculosis and Lupus.—Mr. Jonathan Hutchinson, Sen., who first brought examples of the variety classed in subgroup (c) before the profession in this country, considered that the disease was one of the members of the lupus family, and gave it the name of *Lupus lymphaticus*, and remarked that in its asymmetry it resembled *L. vulgaris*, and in its relation to vessels *L. erythematosus*, but that instead of being associated with blood-vessels, it was intimately connected with the lymphatic capillaries and spaces, and supported his theory by dwelling on the localized nature of the disease, the youth of the patients, the chronicity of the disease, and extension by means of satellite growths, and in reference to the cases associated with

vascular nævus, states that lupus may attack nævi:—he quotes the extensive cell-infiltration described by his son as bearing out this view. The consideration of the members of the series seems to show that there is no such disease *sui generis* as circumscribed lymphangioma; but that the cases are merely rare examples of somewhat limited lymphangioma, but connected by many links with the more generalized forms from which, in some cases, it is difficult to separate them. The cell-infiltration has received a full explanation from Török, and the other points are common to several widely different skin affections. This view of Mr. Hutchinson has not been supported by dermatologists in this country or abroad. In only two of the cases was there a family history of phthisis recorded (No. 16 and Case IV.), and in the latter instance the patient was the subject of phthisis, and a certain number of cases of phthisis occurred amongst Busey's series of generalized lymphangioma: but in none of them was there any apparent connection between the two conditions. Schmidt (*loc. cit.*) has recorded a case of lupus vulgaris affecting the face, forearm and foot, with disease of the left pulmonary apex, and lymphangioma of the mucous membrane of the lip, cheek and gum, and Dr. Crocker has kindly informed me that he has had a somewhat similar case of the association of lupus vulgaris of the face and neck, and lymphangioma of the lip; possibly in these cases there may have been a tuberculous endolymphangitis with lymph-stasis and lymphangioma; the association of lupus vulgaris with elephantiasis or lymphatic cedema has been noted by Kaposi and others, and probably the tubercle had no special relation to the disease, beyond being the means of obstructing the lymph circulation, as may be seen in the course of other of the infective granulomata, especially syphilis, in which elephantiasis in different forms is not uncommon: as in the opinion of many eminent dermatologists there is still wanting sufficient evidence to prove the tuberculous nature of lupus erythematosus, or its affinity to lupus vulgaris, it would seem more reasonable to discard the term lupus altogether, especially as regards lymphangioma (of which Mr. Hutchinson himself says, "it is very different both from lupus vulgaris and lupus erythematosus, but scarcely differs more from them than they do from each other"), than to include three possibly totally distinct affections under one generic name.

Minute Anatomy.—This has been investigated by Tilbury and Colcott Fox (No. 1) with supplementary accounts, and plate by Hoggan, and by Török; by Sangster in one of Hutchinson's cases with two plates (No. 10); by Hutchinson Junior with plate (No. 15); by Darier in the case of Besnier and Doyon (No. 2); by Jacquet in the case of Besnier and Doyon (No. 3); by Schmidt (No. 28); by Török (No. 25) with plate; and in Cases I. and IV. (a figure of some of the growths recurring after operation in Case I., has been published by A. A. Bowlby in his "Surgical Pathology"). Of all these the most complete is that of Török, which will be followed briefly here, supplemented by the other reports.

The Epidermis showed mainly passive changes dependent on the morbid processes which had taken place in the subjacent layers. The epithelial borders were compressed, shortened or obliterated; but in some cases the interpapillary processes were much elongated, and dipped downwards into the septa between the larger lymphatic cysts (Darier, Sangster, Fox), otherwise the stratum Malpighii is unaltered or thinned, sometimes consisting only of one or two layers over a large cyst. There may be an increase of pigment (Sangster, Fox, Schmidt). The stratum corneum is unaltered or irregularly thickened, especially around the orifices of the hair-follicles; these latter are unaltered or (Sangster) enlarged with great irregularities of the root-sheaths, many containing 2-5 hairs, and some acari folliculorum.

The Corium.—The changes affected principally the papillary and subpapillary layers, and involved the lymphatics, the blood-vessels, and the connective tissue. In all the cases the changes in the lymphatics were most striking, and may be briefly enumerated as (a) dilated lymphatic vessels in the subpapillary layer, with occasional varicosities; (b) uniformly dilated lymphatic vessels in the papillary layer, forming closely wound coils; (c) larger cavities, occupying principally the papillary layer and forming the "vesicles": these are developed by the gradual enlargement of the lymphatic vessel and breaking down of the thin septa between the coils: the result is a round, oval, pear-shaped, or irregular cavity, with a funnel-like connection, with one or two large capillaries at its lower part, and into the cavity remains of the pre-existing septa may project: so that there is every transition from normal, through dilated and

varicose lymphatics to cysts and small caverns varying from .1 mm. to 5 mm. in diameter ; the changes in all cases being most marked in the papillary layer, where the capillaries are of the "collecting type" (valveless), and being superficial are less supported ; less so in the subpapillary layer, but are sometimes found even in the deeper part of the dermis (Schmidt). The trabeculæ separating the cavities vary much in thickness, according to the number and size of the cavities in a given space : but there is generally a layer of connective tissue separating the cyst from the epithelium of the follicles and surface, which accounts for the difficulty experienced in rupturing them, but in some extreme cases (Török, Sangster) this may in places be absent, so that the wall of the cyst and epidermis are in contact : in such a case rupture would be easier and lymphorrhagia the result. The vessels and cavities are almost invariably lined by a continuous endothelium, which may be flattened as usual, or present a more "germinating" character with less flattening of the cell body and closer crowding of the cells, and rarely giant-cells and evidence of division (nuclear figures) ; the smaller cavities and capillaries have often at the apex or sides serrated prolongations passing into threads, with their broad basal part in connection with the cavity and finer continuation ending in a slight curve ; the small ones have a nucleus at the point of origin, the larger may be perforated by a fine channel and possess endothelial walls which may serve to connect adjacent cavities. The contents of the spaces are lymph, appearing as finely granular coagulated material, occasionally fine fibrin threads ; in some there is a mixture of blood and lymph (Sangster, Török) or of blood alone ; these last are directly connected with capillary blood-vessels and arise in connection with them : besides this evidence of implication of blood-vessels we find also that the corium is richly supplied with dilated tortuous blood-vessels (Török, Fox), mixed up with the lymphatics, the veins being sometimes varicose (Fox) ; there are dilated capillaries between the cysts and the epidermis (Fox, Török, Darier) which constitute the tufts and striæ referred to, and in the larger trabeculæ between the cysts (Darier, Török), and some of the latter may communicate with the cysts, accounting for the occasional mingling of blood and lymph (Török) : as regards the connective tissue, it is found rich in cells, especially in the neighbourhood of the lymphatics and blood-vessels, whether dilated or not ; this focus-like

infiltration consists of round, oval, and spindle-shaped cells and others with fatty contents and pigment. In some of the cell-masses fine clefts are seen which appear to be young lymphatics or blood-vessels, and contain lymph or blood, and whose walls are formed from the cell-masses. In all the cases described this cell-infiltration is noted except by Sangster and Fox, but in the former it is somewhat indicated in the plate, and in the latter it was discovered by Török on a re-examination of the material; in Hutchinson's case it was so dense as to resemble lupus: there is a hyperplasia of connective tissue also, especially in the neighbourhood of the blood-vessels; and in the neighbourhood of the larger cysts subsequent degenerative changes of the tissue and thrusting aside of connective tissue bundles are seen.

How far the changes in the lymphatics were due to dilatation of pre-existing lymphatics, or to new formation of lymphatics with secondary dilatation, has been a debated point until recently, and simple ectasia may be considered disproved, whether it be ascribed to passive congestion (Wegner) or to traction (Rindfleisch). It does not seem necessary to assume that they must always have an embryonic origin, for lymphatics like blood-vessels may be developed in chronic inflammatory growths and tumours; and from the analogy of the post-genital development of some hæmangiomata (angiokeratoma, angioma serpiginosum), and the occasional post-genital growth of hæmangiomata, it seems logical to infer that lymphangiomata may also arise subsequently to birth and spread. This is supported, as pointed out by Török, by the argument (Langhans), that lymphangioma may develop in the subcutaneous fat which is poor in lymphatics, or so rapidly that it is necessary to assume a new formation, and in the cases under consideration this is emphasized, for dilated lymphatics are found in the apical parts of the papillæ which normally contain no lymphatics, and in greater numbers than could be accounted for by the hypothesis of varix, and especially by the microscopic evidence of new formation of lymph and blood capillaries as seen in the cell-infiltrations and actual transitions from these to vessels, and the evidences of proliferation of the endothelia, (Nasse, Wegner, Török). Whether these angioblasts are cells which are derived from the walls of the vessels (Klebs), or have lain dormant in the vicinity of the vessels since the embryonic development of the vascular system, and have taken on proliferation and develop-

ment into vessels in response to certain stimuli, or whether they are derived from the fixed connective tissue corpuscles (Virchow, Billroth, Winiwarter, Weichselbaum, Schmidt) is perhaps unsettled.

Group IV. includes the cases of cutaneous lymphangioma, in which, in addition to the newly-formed lymphatic vessels, there is also a large amount of fibrous tissue formed—a localized elephantiasis—which forms the principal feature in the clinical picture. The cases are numerous and varied, and present all gradations to the more generalized forms of lymphangioma. It has been referred to in connection with Group II. and some of the cases in Group III., which, however, seem more allied to the other members of their group. In some this condition is reduced to its simplest terms as in Case III., where varicose lymphatics were associated with a plaque of fibrous tissue, and in Leistikow's case, reported by Török. In some there are "vesicles," but probably many other cases of dermatolysis and pachydermia, although wanting in this feature, belong to the same category. This fibrous element is probably quite a secondary feature, and may occur associated with simple, varicose, or cavernous lymphangiomata, or with hæmatolymphangioma. This group, therefore, contains the cases in the boundary line between "circumscribed" lymphangioma and the generalized forms, though many of them are limited at first to the skin, and subsequently affect deeper structures.

Medical literature contains many cases of "varix of lymphatic vessels" affecting the skin only, and it is uncertain how far these are cases of lymphatic varix, or of lymphangioma. But it is probable that future research will demonstrate the existence of varicose lymphangioma confined to the skin and unassociated with hæmangiomata or pachydermia; these cases would then constitute another clinical group of lymphangioma.

In conclusion, I must take this opportunity for thanking numerous friends for the many kindnesses and valuable suggestions, and information about their cases, that I have received, and especially Dr. Colcott Fox, Dr. Pye-Smith and Dr. Radcliffe Crocker.

CLINICAL NOTE.

**CASE OF EXTENSIVE SYMMETRICAL HERPES ZOSTER, WITH
CARBUNCLES AS SEQUELÆ.**

BY WM. SALISBURY SHARPE.

W. F., æt. 64, a goods guard on the Great Western Railway, was knocked down by an engine and struck in the middle of the back and on the head, in November, 1886.

He has had since then what he calls "shingles and boils" on several occasions, and does not remember any such symptoms before the accident.

About the middle of March, 1889, he had herpes zoster, for which I attended him, affecting the area of distribution of the seventh, eighth and ninth dorsal nerves on both sides, but commencing, as a general rule, one or two days earlier on the right than on the left side. Subsequently the posterior branches of the first and second dorsal nerves (*i.e.*, close to the spine on both sides) were affected. Then the sixth, ninth, tenth, eleventh and twelfth dorsals, and all the lumbar in all their branches, and the sacral nerves became implicated in rapid succession from above downwards.

As a rule, there was an interval of from three to four days between the implication of each nerve and the next, and, as already stated, the right side was involved usually one day before the left, but this rule was not an invariable one.

As soon as the affection had reached the lumbar region, small carbuncles, with characteristic central slough, began to form at the points which had been occupied by every large group of vesicles on the regions first affected, and these gradually followed in the wake of the herpes, affecting the course of each nerve in succession downwards, and each group of vesicles in succession outwards. Few of the regions previously affected by definite groups of vesicles were unaffected by these carbuncles, which were usually ovoid in shape, and, on an average, measured three-quarters by about three-sixteenths of an inch, the direction of their long axis being invariably that of the implicated nerve.

The region of the ninth and tenth dorsal nerves was visited by a second crop of carbuncles about fourteen days after the first, these affecting the seat of lesser groups of vesicles.

On the 29th of April a large carbuncle began to form over the sixth, seventh, eighth and ninth dorsal spines.

A free crucial incision was made in it during my absence from town by my partner, Mr. T. Frampton, on the 4th of May. Notwithstanding this, a large piece of integument and subcutaneous tissue sloughed. The slough separated on the 17th of May, leaving a cavity nearly circular, about four inches in diameter, and quite three-quarters of an inch in depth.

The deepest part was to the right of the dorsal spines. There was no implication of ligament or bone. While the wound was healing by granulation about six skin grafts were put on, but only two grew. The wound healed about the 10th of July. No carbuncle appeared after the large one had reached its height, but two were present over the ilium at the time, nor has he ever been troubled by any since.

There was no albumen or glucose in the urine at any time during the illness.

All cases of bilateral or symmetrical herpes zoster appear to be worthy of record, as they are said in most text-books to be rare. No alternative diagnosis could in this case be suggested, the lesions and their grouping being absolutely typical. The association with an antecedent direct injury to the spine appears to be a direct and causal one, no other explanation of the occurrence of the condition being to hand. The course pursued by the disease was altogether anomalous, and I have failed to find any analogue to it in the literature of the subject. The occurrence of successive crops of vesicles with herpetiform arrangement naturally suggested the idea of Duhring's dermatitis herpetiformis (vel Hydroa) in the first instance, but many points in addition to the subsequent progress of the case negatived this idea.

The complication with carbuncles was extremely puzzling, and, I admit, altogether new to me. I was, however, able to exclude the idea of their being due merely to inoculation of pus cocci, as the patient was decrepit and unable with his hands to reach many of the parts affected by carbuncles. I can only suggest that the perverted nerve influence which underlay the eruption of herpes was also responsible for the subsequent local necroses.

CURRENT LITERATURE.

THE PATHOLOGY OF ECZEMA. Professor NEISSER. (*Archiv. für Dermatologie, Ergänzungshefte. Heft i., 1892.*)

THE attempt to systematize our clinical medicine has, as Neisser truly remarks, in no department been more earnestly made than in that of dermatology; but hitherto, unfortunately, with no practical result whatever. In more recent times it has been hindered by the constant stream of new discoveries, pathological, histological, or ætiological, which have all tended to drag some one point too prominently to the front, and still more by the necessities of teaching, which, while compelling the teacher to accentuate the phenomena which appear on the skin, relegate the all-important question of ætiology, which chiefly attracts the expert, into the background. A fusion of both the pathological and ætiological points of view is the real solution of the difficulty, and until it can be effected no *system* of skin diseases will be possible. The aim must be, for all diseases, the building up of natural groups such as we already possess in the class of infectious granulomatous tumours, the relationship of which is based on all the pathological items involved—the ætiology, histology, and clinical courses.

Much confusion has been brought into the study of eczema by the fact that different observers have looked at the subject from different points of view, some laying special stress on the *form* of the affection, others on the *course*, and others, again, on the *ætiology*. Neisser, however, comes to the opinion, after careful examination of all their views, that among those who candidly recognize in how much we are still in ignorance, the divergence of opinion is not really so serious.

The first and most essential point is to have a clear and fixed idea of what is meant by and included under the term *eczema*. He regards it as a single and well-defined form of disease—a special cutaneous lesion, partly primary and independent, occurring on a previously healthy skin, partly a complication of already existing skin diseases. The scientific inquiry into the way in which it has been brought about, and which of the concurrent ætiological factors is really responsible, will always give way to the observation of the disease-product—the eczema itself.

He holds to Hebra's definition, widening it, however, by accentuating the peculiar alteration of the epithelium, which is, in his opinion, actually specific, and essential to the existence of the eczematous condition. Eczema, according to this view, is a morbid process, which manifests itself on the one hand (1) as a superficial inflammation of more or less acute commencement, continuing with a marked serous hyperæmia and exudation, and being confined to the papillary body and the upper layers of the corium, its presence being accompanied by a fresh redness and swelling of the uppermost layers of skin, and the formation of papules corresponding to the swollen papillary body, and of vesicles; and, on the other hand (2), as a characteristic shedding of epidermis, for which the expression "desquamative, epithelial catarrh" is the most suitable.

The development of the separate symptoms is, of course, a very varying one, especially that of the catarrh. The vesicles may form quickly, and burst, or not; or their development may be stopped by cessation of the irritating cause, or by the action of remedies, or by the presence of thick skin, &c.

But more varying still is the course of the disease: (1.) it either proceeds *typically* as so-called acute eczema, persisting on the area of the first local eruption, and healing without relapse; this conception of an acute eczema preceding the chronic is held not only by the Vienna school, but by almost all the more modern authors; (2.) or *atypically*, which is far more frequently the case. It is atypical because the *acute* eczema wanders, either steadily or by jumps, or *relapses* owing to the great sensitiveness of the skin to injury, or becomes *chronic*—i.e., as Auspitz pointed out, assumes the chronic pachydermatous condition. This condition undoubtedly predisposes to relapses of acute eczema, but chronic eczema must be carefully distinguished from chronic "eczematosis."

The anatomical appearances correspond exactly to the clinical picture, and so far it has not been possible to demonstrate any difference in the histological changes, however great the difference of their cause may have been. The well-marked hyperæmia, the intense infiltration of leucocytes which fills up all the connective tissue network, with the very slight active formative participation of the connective tissue cells, correspond completely with the clinical symptoms of the acute inflammation of the first stage of eczema. But still more essential are the processes which soon come into play in the epithelium, the wandering of pus corpuscles into the interspinous spaces, the œdema between the epithelium and the cells of the basal horny layer, the disappearance of the granular layer, the deficient horning with persistence of the nuclei in the uppermost cell layers (Leloir's *Kératinisation atypique*, or *akératinisation*), but especially the alteration in the individual epithelial cells (*altération cavitaire*), by which they are affected or destroyed not in large superficial masses but cell by cell. By the action of this *altération cavitaire* on the rete cells a honeycombing is produced, which leads finally to the formation of a small vesicle in the mass of epithelium, or may proceed further up to the level of the granular or horny layer.

Unfortunately we know nothing with certainty of the mode of action of the irritation which produces the eczema. It is clear that if the *agens* comes from without on to the skin, the epithelium must be directly affected, whilst the inflammation under such circumstances could be regarded partly as the consequence of epithelial alteration, partly as the consequence of inflammatory irritants acting directly on the vessels.

This would bring about directly a change in the vessel-wall, and cause, by the effect of attraction, a chemo-tactic gathering of leucocytes towards the seat of the chemical irritation.

If, however, such an *agens* is not present, or is not known, the question then arises, is the change in the epithelium the consequence of the inflammatory transudation process—which appears very improbable, for then a uniform upheaval of large layers of epithelium would be expected—or does an *agens* coming from within work directly and primarily on the epithelium? A course of eczema of the latter kind is hardly comprehensible, since the blood-vessels form the only means of diffusion for these chemical agencies; and only if the conception of a direct trophoneurotic cause of eczema were considered would a primary epithelial internal pathogenesis of eczema be imaginable.

The amount of effect to which the eczematous process attains varies greatly, but corresponds generally to the duration of the development, or to its intensity.

In the local hyperplasiæ of chronic eczema we find (1.) extension of the inflammatory processes to the deeper layers of the skin and the vessels (together with a stasis of capillaries and small veins, probably of secondary character); (2.) more extensive and probably essential participation of the fixed connective tissue cells, which leads to formative proliferation processes and finally to hyperplasia of connective tissue.

All these discoveries unfortunately do not put us into a position to explain the real and essential nature of eczema. They fail to explain why in eczema there is lacking that *restitutio ad integrum* which takes place so quickly and so regularly in other affections in which useless or injured epithelium is thrown off, or in which repair takes place in the deeper layers of the skin (formation of bullæ, burns, &c.). The true nature of the special cause which presides over the pathological changes still escapes us.

The nerve disturbances also are not as yet understood, although clinically they stand at the head of the symptoms, both subjectively and objectively (in consequence of the effects of scratching to relieve the itching), perhaps also from the reflex processes excited by the scratching, which tend to the dissemination of eczematous eruptions. The inquiry as to whether the peripheral nerve alterations are purely functional and due to pressure of infiltration in the papillary body, or whether they are due to anatomical changes of the character of a neuritis, has only been entered into by Colomiatti (1879) and Leloir (1881), but they found no histological changes which were in any way peculiar to eczematous inflammations. So that the nervous causation of eczema must be regarded at present only as a hypothesis.

The extraordinary clinical heterogeneity of the conditions which are known as eczematous eruptions point to a diversity in their ætiology and pathogenesis. But the initial questions are still unanswered as to whether all causal factors are equivalent, or whether there are causes which have to rank respectively as primary and secondary, the former being essential, the latter perhaps only conditional complications or influencing the course. Still, much can be done to settle these points by the observation and collation of facts, and by the avoidance of discussions simply of words and names and upholding of exclusive doctrines. It will then be seen that this typical inflammatory dermatosis is, like inflammation itself, not due to any one cause alone (*e.g.* bacteria), but that inflammation and even suppuration may be brought about by many and very different causes.

The chief points to seek out are :—I. The primary, real causes of the eczema; II. The predisposing conditions, preparatory to I.; III. The circumstances which condition the chronicity of an eczema, and the factors to be carefully separated from these; IV. The purely secondary circumstances, which only influence the further course.

I. The *actual cause* of the eczema must be an agent which is able to bring about an acute inflammation, with much porous exudation and marked alteration of the epidermis.

Such causes are :—(1.) Influences of mechanical nature; (2.) Substances which act chemically and externally; (3.) Substances which act chemically and internally; (4.) Micro-organisms, bacterial and mycelial, probably also animal parasites (Cytzoen); (5.) Nervous causes (Bulkley, Leloir), unproved and hypothetical.

The effect of these different *aggressive* factors has to be taken into consideration with the greater or less *resisting power* of the skin, which co-operates in the form of

II. *Predisposing causes*, which increase receptivity and sensitiveness of the skin for eczema excitants.

(a.) General conditions:—(1.) Cachexiæ, Anæmiæ; (2.) Anomalies in tissue formation, “lymphatic” or “scrophulous” diathesis; (3.) Metabolic anomalies of the organism, gout, diabetes, &c.

(b.) Local conditions of the skin, such as seborrhœa, prurigo, chronic psoriasis, mycosis tonsurans, dermatitides of other kinds, &c.; all conditions facilitating the action of inflammation-excitants, and favouring exudative processes by the already present vascular alterations. Also abnormal conditions of vascular tonus (during dentition in children; vasomotor neuroses, as acute œdema).

III. The crucial point in every discussion of the pathology of eczema, and the cause of all the differences of the schools, is the cause of the chronicity of eczema, whether taking the form of a chronic eczematous condition, with multiple, disseminated, recurrent, wandering, acute or subacute eruptions, or of a localized chronic process. In such an inquiry the primary causes of the eczema, those which immediately condition the chronicity, are to be carefully distinguished from those which simply protract its course.

In the case of those forms of eczema in which, by long continuance and relapses, a chronic eczema is brought about, the following possibilities occur:—

1. A primarily active chemical or mechanical agent not only works at the moment, but continuously, or often repeatedly. This class of cause often escapes notice for a long period, as when caused by very minute quantities of the offending substance, *e.g.*, small particles of iodoform.

2. The primary and perhaps single action of chemical and mechanical forces cause injuries to the tissues which are not noticeable at once, but last for long periods on the spot originally attacked, and make themselves evident whenever fresh and auspicious circumstances arise. A considerable number of the trade eczemas, with their continuous relapses, are brought about in this way.

3. The spread of acute eczemas is often due to spread of this injurious action of a chemical or mechanical irritant (even after only one contact) over much larger surfaces than the original extension of the disease would give ground for supposing.

4. Where micro-organisms are the prime factors in exciting the eczematous action, the explanation of the recurrences is easy.

To this short list of primary external causes which excite continuous and extending outbreaks, must be added the very varied conditions which influence secondarily the course of the eczema.

A. Conditions set up through free exposure of an eczematous surface.

(a.) The action of infecting micro-organisms, chemical agents which are used in business or in daily life (such as soap and water), acting as permanent causes of inflammation and maceration.

(b.) Irritable condition of nerves, caused by a deficiency of the protective horny layer. Itching causes scratching, and thus fresh exacerbations, and leads thus to a *circulus vitiosus*. The walls of the vessels suffer from changes which are of long duration and retard the return of the inflammatory conditions to the normal.

(c.) The localization of an eczema can be the cause of the accompanying

chronicity, when it involves, *e.g.*, the friction of continuous surfaces; the persistent irritation of nasal discharge on the upper lip; the irritation of defæcation in eczema of the anus, &c.

B. Conditions existing in the organism which may influence the further course of an eczema may be :—

I. Conditions of a local character, *e.g.*, (1.) varicosities, or (2.) states of circulation depending upon unfavourable localization (inflammatory venous stasis in the lower legs), or (3) functional abnormalities in the skin (marked seborrhœa, abnormally developed adiposity leading to anæmia), influence unfavourably the course of an inflammation; (4) softening of the horny layer by maceration, hyperidrosis and seborrhœa hinder the repair of normal horn- and epithelial-layers, and are the external conditions which bring about the chronicity of an eczema arising from external causes.

II. Internal circumstances may have an equally important effect on the course (a) through vasomotor hyperæmias originating in reflex influences which add themselves on to inflammatory hyperæmias and intensify them, or fan them again into flame, *e.g.*, in dentition, uterine diseases, intestinal troubles, &c.; (b) through intoxications—in the widest sense of the word—abnormal additions to the body fluids, to which are due the eminently chronic course of the eczemas in diabetes, in arthritis, and probably others less well marked but none the less important disturbances of general nutrition, in chronic intestinal troubles, kidney disease, &c.

The so-called scrofulous eczemas are perhaps due to abnormal structural conditions in the organism, and although these have not as yet been demonstrated it is certain that the skins and mucous membranes of “lymphatic” people are very easily injured, and that in their inflammatory conditions arise more readily, heal with more difficulty, and are more prone to relapse.

In Neisser's opinion this is the ætiology of eczema as set forth by Ferdinand Hebra, and the reason of the opposition which has been shown to the doctrine of eczema, as taught by the Vienna School, lies in the neglect to consult the works of Hebra himself.

[The idea that Hebra regarded eczema as a purely local condition is certainly held very widely both in this country and elsewhere. It is probably due to the emphasis with which he insisted upon the possibility of producing eczematous eruptions by the application of irritants in perfectly healthy people, and by his ridicule of the French doctrine of causal “diatheses.” But he himself definitely says, “To avoid misunderstanding, I must add that every case of this disease is not the result of local irritation, but that it may be caused by affections of the rest of the body.” The rôle assigned to the purely local treatment of the affection by the teachers at Vienna and their alumni is, in all probability, the cause of the continuance of this misconception.—H. G. B.]

The cause of the opposition is mainly the fact that the anatomical and clinical picture of the form of disease to which the name eczema is to be applied, has not been properly adhered to, but that arbitrary criteria have been substituted for it. Thus Leloir, Brocq, and others limit the application of the term eczema to those cases which are of “constitutional” or nervous origin, and refuse it to the same eruption if caused by external causes. Some dermatologists, like Bulkley, with perfect consistency, exclude from the class the whole of the eczematous-looking affections which are caused by purely external factors, whether mechanical, chemical, or micro-organic, whilst Unna and others consider that only parasitic

eczemas should be included. These authors recognize a "Dermatitis eczematosa artificialis" as distinct from a precisely similar "Eczema verum acutum" originating from internal causes. Neisser, of course, recognizes dermatites which are not eczemas, but if they present the clinical picture of an eczema, he then applies that name to them.

Another group of authors will know nothing of acute eczemas in any form, and refuse to apply the name to any disease which does not take on a thoroughly chronic course, whether evinced by acute recurrences and multiple eruptions, or by the formation of local pachydermatous infiltrations. This division is all the more incomprehensible in that it lacks any support derived from the real nature of the condition itself, and is opposed by the notoriously very frequent—in fact, almost invariable—origin of these chronic eczemas from acute forms.

The attempt to separate *ex post*—i.e., from the course of the affection, as subsequently revealed, acute "eczemas," so called because they are going to become chronic, and "dermatites" which may not be spoken of as "eczemas," because they are going to heal rapidly—is perfectly arbitrary. Even though many eczemas, owing to their close connection and dependence on general systemic disorders, may, in a certain sense, be regarded as "constitutional," it is certainly wrong to try to construct for all cases a "disease" (*Krankheit*) in contradistinction to a disease-process (*Krankheitsform*), and thus to tear apart identical and, so far as our powers of observation go, inseparable manifestations of disease. The fact that we actually know the ætiology of the artificial eczematous affections of the skin, whilst for the nervous and diathetic eczemas of Bulkley and Brocq and others we have to content ourselves with vague suppositions, is no sufficient ground for the separation into cardinaly different classes of otherwise similar conditions.

Neisser strongly upholds Hebra's purely objective method of looking at the question of the eczematous eruptions. Whilst asserting that purely local causes could both make eczema and could, through the change of their intensity, the frequency of their action, by scratching, or by reflex irritation, bring about chronic eczema, Hebra did not deny that many internal causes were also able to make eczema, nor that the constitution influenced the susceptibility of certain individuals and the course of the disease. His objection was to the substitution of fine-sounding words, such as "diathesis," "nervous conditions," &c., for exact positive knowledge, without which it was not possible to know if these were really primary factors in the causation, or merely influences affecting the course of a disease set up by other as yet unknown causes, which still remained to be investigated.

After reviewing the classifications and theories of Hardy, Brocq, Besnier, Leloir, and Gamberini, he finds that, in large measure, they agree with Hebra's views, but that the real ground of contest is (1) as to whether the nomenclature of the artificially originated acute dermatites which appear in the form of an eczema are to be called eczema or not, and (2) as to whether, in those cases in which no external causes are known, the possibility of internal causes is alone to be recognized, or whether our want of knowledge should be openly confessed. Neisser accepts Hebra's views, and speaks of every eruption as eczema which appears in the form of this disease, and especially since the disease which is recognized by everybody as eczema often appears as a direct continuation of these acute eruptions, and without any alteration in clinical appearances.

H. G. B.

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THE FUNCTIONS OF THE GLANDS OF THE SKIN,
BEING THE PRESIDENTIAL ADDRESS DELIVERED BEFORE THE DUBLIN
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MR. PRESIDENT, Council, and Members of the Dublin University Biological Association,—I thank you for the great honour you have conferred upon me in electing me your President for the ensuing year. I feel proud that my name will be inscribed on the roll of Presidents of this Association, a roll which contains so many honoured and distinguished names.

It has been the custom of this Association to expect the President when entering upon office to give an opening address. This I, when an ordinary member, used to regard as a very natural demand, but when it came home to myself I confess that for the first time I thought that an opening address might be very reasonably dispensed with; not on account of the labour which the preparation of such an address must entail, for the labour is but a small return for the honour of being elected President, but on account of the difficulty in dealing with any subject in a manner worthy of the position. However, in attempting to fulfil this my first duty I have the consolation that all my shortcomings will be kindly and generously dealt with.

The subject I have selected for my address is the functions of the glands of the skin. The study of diseases of the skin has been a

very attractive one to me ever since my interest in that branch of medicine was first awakened during my student days by the teaching of the President of the Royal College of Physicians of Ireland, Professor Walter Smith. I was accordingly led to look to the skin for a subject upon which to give an address, and, moreover, I felt anxious to investigate some points in its physiology, regarding which Dr. P. G. Unna of Hamburg, one of the greatest of modern dermatologists, holds a view antagonistic to most other workers in the field of dermatology. It is regarding the functions of the two glands of the skin—the sebaceous and the sweat-glands—that Unna's view and that held almost universally by other dermatologists differ. The sebaceous glands are generally considered to have as their function the lubrication of the general surface of the body. The object of this lubrication is supposed to be—1. To prevent too rapid drying of the surface cells, and consequent cracking of the skin, and too rapid desquamation ; 2. To obviate an injurious maceration of the epidermis by the sweat ; and 3, To keep the skin covered with greasy matter which limits evaporation. The sebaceous glands exist everywhere where there are hairs, and so are absent only on the palms and soles and on the dorsal aspect of the terminal phalanges of the fingers and toes, where no hair exists. Oiling of the palms and soles is said by some to occur, and to be effected by the sweat which in these places is, it is said, modified, containing, unlike the sweat of other parts, some fatty matter.

The function of the sweat-glands is generally held to be, partly, but to a very slight extent, respiratory ; partly excretory, as when the skin is called upon to relieve the kidneys ; but in the main for the regulation of the temperature of the body.

In order to explain the view which Unna holds in regard to the functions of the sebaceous and the sweat-glands it will be necessary for me to describe their structure and position, as found in the human skin, somewhat fully.

The sebaceous glands are for the most part connected with the hair-follicles, being situated just below the funnel-shaped mouth of the follicle, that is, at its neck. Usually each follicle has two sebaceous glands opening into it, one on each side ; some of the larger follicles possess from three to six sebaceous glands, for instance those of the scrotum and mons veneris. The gland consists of a short duct which

divides into a larger or smaller number of alveoli; the wall of the gland is formed by a basement membrane continuous with the vitreous layer of the hair-follicle, and this basement membrane is lined by cells continuous with those of the outer root-sheath of the follicle; the outer of these cells are cubical in form and are nucleated and protoplasmic, the inner gradually undergo fatty degeneration and form the fat of the sebaceous secretion. The gland is filled up with fat and fattily degenerated cells, so that virtually no lumen exists. The sebaceous secretion consists therefore of fat derived from fattily degenerated cells and of fat still contained within cells not completely degenerated. The secretion is emptied into the hair-follicle at its neck and passes up along the hair to the surface. The sebaceous gland possesses an afferent arteriole which breaks up into a network of capillaries surrounding the gland.

There are some parts of the body where sebaceous glands exist and no hairs, viz., the red border of the lips, the labia minora, the inner surface of the labia majora, the glans penis (Tysonian glands) and the eyelids (Meibomian glands). The palms and soles and the dorsal aspect of the terminal phalanges of the fingers and toes are, as I have already stated, without both sebaceous glands and hairs.

The structure of the sweat-gland is as follows:—It consists of a tube which opens on the surface: this tube passes through the inter-papillary portion of the epidermis and the greater part of the true skin and in the deeper part of the skin is twisted into a coil and terminates blindly. The greater part of the coil constitutes what is generally believed to be the secreting portion, and differs essentially in structure from the duct portion, which comprises the first part of the coil and the tube which passes up through the skin and epidermis. The structure of the secreting part is, a *membrana propria*, internal to which is a single layer of involuntary muscular fibres arranged longitudinally or obliquely to the long axis of the tube, then a single layer of columnar cells bordering a distinct lumen; these cells have in their external portion a radial striation. The wall of the duct from the secreting portion to the base of the epidermis is composed externally of connective tissue with, it is said, in some of the larger ducts, some involuntary muscular fibres; internal to this is a *membrana propria*, lining which are two rows of cubical cells, of which the innermost have on their inner surface a distinct cuticle: the

lumen of the duct, though distinct, is smaller than that of the secreting portion. The duct in passing through the epidermis runs a more or less spiral course and has no proper wall; its wall is formed simply by the cells of the epidermis through which it passes, these cells dipping down slightly around the tube. Thus, the lumen of the sweat-duct where it passes through the epidermis is in direct communication with the interspinal passages of the prickle-cells. The vascular supply of the sweat-glands and ducts is, as described by Unna, the following: a vascular branch plexus derived from the papillary system of vessels accompanies the excretory ducts of the sweat-glands downwards; the coils of the sweat-glands receive capillary plexuses from the system of blood-vessels found at the border between the corium and subcutaneous tissue.

Having described the anatomy of the glands, I shall now state Unna's view as to their functions. Unna adopts the view and the arguments in its favour brought forward originally by Meissner in the year 1856. The function of the sebaceous glands, according to Unna, is simply for the lubrication of the hairs and not for the general oiling of the body. Unna writes, "The lubrication of the hair is the true function of the sebaceous glands, which might better be called the glands of the hair-follicles." The function of the sweat-glands, according to him, is two-fold, the function of the coil and the function of the duct, at least of that part of the duct which passes through the epidermis. The coil secretes, according to Unna, fat which passes outwards through the duct, and which when it reaches the epidermis can penetrate into it owing to the fact that in the epidermis the lumen of the duct is in direct contact with the epidermic cells and their interspaces. The coil has, therefore, for its function the general oiling of the body. Unna writes, "I once observed a natural infiltration of the juice-spaces of the epidermis with fat, in which the fat stained by osmium surrounded the cells with a black frame." The watery sweat, according to him, is derived not from the coil, but from the blood-vessels. The fluid present in the juice-spaces of the epidermis, which fluid is derived from the papillary blood-vessels, flows directly into the duct where it passes through the epidermis; accordingly this portion of the duct serves as a means of escape for the lymph present between the epidermic cells. Unna refers to the observations of Key and Retzius, who found that the sweat-pores can

be filled from the cutaneous lymph-passages by way of those of the epidermis; "We therefore have," Unna writes, "in the sweat-pores a means of escape for the lymph circulating through the epidermis." Unna believes, moreover, that a portion of the watery sweat may be derived from the blood-vessels which surround the duct in the corium, and may be poured into this part of the duct. The sweat, therefore, which escapes from the epidermic portion of the sweat-duct, or, as Unna calls it, the sweat-pore, is partly fatty, partly watery; the fatty portion is derived from the coiled portion of the sweat-gland, which he calls coil-gland; the watery portion is derived from the blood-vessels surrounding the duct where it passes through the corium, and from the lymph in the juice-spaces of the epidermis. Thus Unna's view is altogether different from the general view. The general view is that the coil is the sole secreting part, secreting all the constituents of the sweat; the duct is a passive channel to convey the sweat to the surface; it is not generally held that fat is secreted by these glands. Unna's arguments upon which he bases his views are these:—

1. The proof that the sweat-glands contain fat is afforded by the frequent staining of the coils with osmic acid and the constant staining of the ducts. He writes: "The epithelium of the coil has a clear border which is not always blackened with osmium, whereas the epithelium lining the duct has a border which is always stained by it, probably in consequence of its imbibition of the excreted fats and fatty acids."

2. The sebaceous glands are mostly appendages of the hairs and open into the hair-follicles. Their secretion can only be poured *on* the skin, not *into* the epidermis, as the mouth of the follicle is lined by horny layers. The sweat-duct, on the other hand, where it passes through the epidermis is in direct contact with the epidermic cells and their spaces, and so the fatty sweat is poured *into* the epidermis, and the epidermis, as a whole, is lubricated by it.

3. The sweat-glands are particularly numerous in places which require lubrication, *e.g.*, the axilla, folds of the groin, palms and soles. The sebaceous glands are absent on the palms and soles, places where lubrication is needed.

4. The sebaceous glands are not very numerous, and are congregated chiefly upon the hairy scalp; consequently, the general

lubrication of the body can hardly be effected by them. The sweat-glands, on the other hand, are very numerous, and are uniformly distributed.

5. As a pathological, or clinical, proof that the sweat-glands secrete fat, Unna refers to cases of severe acne of the face in which the hair-follicles are obstructed with sebaceous secretion, and yet the face may be oily. How, he argues, can the fat which oils the face be derived from the sebaceous glands whose secretion, owing to the plugging of the hair-follicles, cannot reach the surface?

6. The proof of the double function of the sweat-gland, the function of the coil and the function of the duct, is afforded, according to Unna, by the following facts:—

(a.) There is no proportionate correspondence between the number of sweat-glands and the amount of sweating in any locality; for instance, the face, neck, and nape sweat freely, but they contain much fewer sweat-glands than do the palms.

(b.) The vascular supply of the duct is derived from a different source from that of the coil; the blood-vessels of the duct are derived from the papillary system of vessels, those of the coil from the horizontal system of vessels situated at the junction of the corium and subcutaneous tissue.

(c.) The upper part of the sweat-duct is provided with cubical epithelium, and is surrounded by a close rete of vessels suggesting an active secretory function, and not the passive function of a mere duct.

(d.) The corkscrew-like spiral canal in the epidermis does not belong to the sweat-duct alone, but to the open juice-spaces of the epidermis which surround it. We have no right to maintain that the sweat which makes its appearance at the sweat-pore comes from the duct entirely, and eventually from the coil.

(e.) Unna, moreover, instances the case of the dog, which notoriously does not sweat, but yet has coil-glands whose ducts open into the hair-follicles. He writes: "The sweat-pores are the *conditio sine qua non* of sweating. The dog does not sweat because it has no sweat-pores."

Unna believes not only that the fat which lubricates the skin is derived from the coils of the sweat-glands, but also that the sub-

cutaneous fat is a product of the coils. According to him, the involuntary muscles situated within the *membrana propria* of the coils are so placed opposite the interval between the cells lining the coil that they serve not only to force the fat of the secretion into the duct, but also into the lymph-spaces surrounding the coil. The fluid part of the lymph is removed, but the fat remains behind and accumulates in the subcutaneous tissue. He brings forward the following arguments in favour of this view:—

1. The sweat-coils and subcutaneous fat are developed at the same time.

2. The chemical character of the fat of the coil-glands at birth which is seen in the *vernix caseosa* (believed by most dermatologists to be an affection of the sebaceous glands, and not, as Unna holds, of the sweat-glands) and that of the subcutaneous fat are identical.

3. The chemical character of the subcutaneous fat and that of the coil-glands changes simultaneously after birth, containing more olein and less stearin.

4. The vascular supply of both the subcutaneous fat and the coils is derived from the same source, namely, from the horizontal system of blood-vessels situated at the junction of the corium and subcutaneous tissue. Unna calls this "the system of the coil-glands and fat tissue."

5. The relation which the fat of the subcutaneous tissue bears to the coil-glands is brought forward by Unna as a further argument in favour of his view. He describes columns of fat ascending from the subcutaneous tissue towards the coils. Columns of fat passing upwards in a nearly vertical direction from the adipose tissue to the bases of the hair-follicles were described by J. Collins Warren under the name *columnæ adiposæ*. Unna regards these columns as being related to the sweat-coils, and not to the hair-follicles.

The disease called *seborrhœa*, in which crusts of fatty matter collect upon the skin, and which is regarded by most dermatologists as an abnormal secretion from the sebaceous glands, Unna regards as an inflammatory disease of the coils of the sweat-glands, and believes that the fat of the crusts is derived from the coils.

Before one can accept Unna's view of the function of the sweat-glands it is obviously necessary to determine whether there is any fat

in the secretion of these glands. This question I have endeavoured to determine by a microscopic examination of osmic acid-stained sections of the skin, not only of man, but of several other mammalian animals. If the function of the sweat-glands in man is to secrete fat for the purpose of lubricating the skin, we may presume that a like function belongs to the sweat-glands of other mammalian animals. If, therefore, the sweat-glands of man and other mammalian animals secrete fat, osmic acid ought to reveal its presence.

The method I adopted is as follows :—I hardened portions of skin taken from different mammalian animals in Müller's fluid, and having cut sections, stained some of them in osmic acid and alum carmine, and then mounted them in glycerine. Some sections I stained in alum carmine alone. I omitted osmic acid in these sections in order to contrast the appearance of the skin not treated with osmic acid with that treated by it. In some instances it was exceedingly difficult to make out not only where the sweat-ducts opened, but even whether sweat-glands existed at all, and so I had to call to my aid spirit-hardened sections to make out details of structure. In most instances the portion of skin which I selected for examination was taken from the back of the animal, as I thought it well to choose a part with no special function, a part whose function may be considered almost alike in most animals. I examined, however, in some cases the skin of the groin, axilla, palm, and sole, the two former being places where, if lubrication is needed, it would be needed most ; the two latter because the oiling of the surface, if it takes place, must be effected solely by the sweat-glands, as sebaceous glands are absent. I also examined the human scalp in order to ascertain whether Unna's view that the fat in seborrhœic crusts is derived from the sweat-glands, may be accepted.

I desire to express my thanks to my friend, Professor Alfred Scott, for the very great assistance he gave me in my investigation, not only by giving me many valuable suggestions, but also by looking over many of my sections and confirming my results.

The animals whose skin I examined are : the pig, horse, sheep, and ox ; the badger, weasel, ferret, otter, dog, and cat ; the rabbit, hare, guinea-pig, rat, mouse, and squirrel ; the bat ; the hedgehog and mole ; the monkey ; man.

I shall describe first what I found on examining the skin of the

back (or, in the case of the horse and ox, of the neck) of these animals; the description of special parts I shall give later on.

The sections I made were all vertical sections, made parallel to the direction of the hairs.

My examination was specially directed to three structures: 1. the sebaceous glands; 2. the sweat-glands; 3. the subcutaneous fat.

1. *The Sebaceous Glands*.—In all these animals sebaceous glands are present. In structure they resemble those of man. In most of the animals examined the central portion of the gland was deeply blackened with osmic acid; cells filled with deeply blackened fat granules were found in the deepest part of the gland furthest away from the duct, while nearer the duct, and in the lumen of the duct itself, a continuous mass of blackened fat was observed. It is strange that in the case of the sebaceous glands of the sheep osmic acid did not blacken them, but only produced a grey staining. In the rat, rabbit, and hare the glands were but little blackened by osmic acid.

In studying the position of the glands and the termination of their ducts attention must be paid to the arrangement of the hairs in the different animals. There are three distinct modes of arrangement. In some animals the hairs are arranged singly, in a more or less isolated manner, *e.g.*, in the pig, horse, ox, sheep, bat, mole, monkey. In others, the hairs are arranged in groups, two or three close together, but emerging on the surface of the skin from distinct follicles. Each group is separated by a more or less wide interval from the neighbouring group. This grouped arrangement is seen in some of the rodents. The third mode of arrangement appears to prevail in the carnivora, though it is not limited to this order of animals. The hairs are arranged in bunches; there is one common tubular depression, varying in depth in different animals, for each bunch; into the bottom of this depression the separate follicles of the hairs open. The hairs, therefore, emerge on the surface of the skin in contact with each other. Single hairs, each possessing an entire follicle of its own, are occasionally seen in animals in which the general arrangement of the hairs is in bunches; in such cases the single hairs are larger than those of the bunch. In the animals in which the hairs are arranged in either the first or second mode each hair appears to possess two sebaceous glands; in those animals whose hairs emerge in bunches from a common tubular depression it would appear that each indi-

vidual hair does not possess separate sebaceous glands, but two or more sebaceous glands open by their ducts into the bottom of the common tubular depression. The distance from the surface at which the sebaceous ducts open varies very much in the different animals; thus, in the mole, the sebaceous duct opens at a considerable distance from the surface of the skin, and in the animals whose hairs are arranged in bunches the distance from the surface at which the duct opens depends upon the depth of the common tubular depression. In the hedgehog each spine possesses two sebaceous glands, one on each side, which open into the follicle of the spine; these glands are very small and pyriform in shape; they are almost identical in size with the sebaceous glands which open into the minute hairs which are present here and there between the spines. In the dog the sebaceous ducts are unusually long, and in places two long narrow ducts may be observed coming from the different lobes of the gland, and opening by a common duct into the bottom of the common tubular depression for the hair-bunch. In the horse the glands are large also.

2. *The Sweat-glands*.—I found sweat-glands present in all the animals I examined, with the following exceptions: the otter, badger, and all the rodents—rabbit, hare, guinea-pig, rat, mouse, and squirrel. I examined a great number of sections of the skin of most of these animals, and could see no trace of either sweat-gland or duct. In the case of the badger, whose skin I was only able to obtain about three weeks ago, time failed me to examine more than a few sections; therefore I cannot speak with any degree of positiveness as to the presence or absence of sweat-glands; but in the case of the otter and rodents I feel justified in concluding that if sweat-glands are present in the skin of the back they must be exceedingly few in number. Foster's statement in his "Text-book of Physiology," that "rabbits and other rodents appear not to sweat at all," seems to be explained by the absence, or at any rate the fewness, of sweat-glands in these animals. One feels inclined to ask, Can the absence or fewness of the sweat-glands in the rabbit explain the fact that that animal dies when covered with an impermeable varnish? In animals which possess sweat-glands the escape of fluid sweat, though to a considerable extent dependent upon vaso-motor nerves, is mainly dependent upon special secretory nerves belonging to the glands. It is now generally believed that the cause of the rabbit's death when

covered with a varnish is injury to the vaso-motor nerves, and consequent dilatation of the cutaneous blood-vessels, and thus, excessive loss of heat occurring through the varnish. The absence of sweat-glands would seem to imply an absence of any true fluid secretion from the skin, and so an absence of any mechanism which would control the escape of fluid from the skin and prevent it from being absolutely dependent upon vascular dilatation.

The results of varnishing animals are different with different experimenters. It is now, I think, generally agreed that death only follows in the case of rabbits or other like animals. I am indebted to Professor Purser for reference to the literature of this subject.

Contrary to what might be expected, the sweat-glands in the dog are of considerable size, and numerous. In the cat these glands are very few in number. They are numerous in the horse, sheep, ox, weasel, and ferret. In the bat, mole, and hedgehog they are not very numerous, still they are sufficiently so to be discovered without much difficulty.

The structure of the gland- and duct-portions of the sweat-glands in the different animals is practically identical with that of man. The gland-portion consists of a *membrana propria*, and is lined by one layer of cells, either cubical or columnar. Internal to the basement membrane I found in most cases involuntary muscular fibres as in man. The duct-portion in the corium up to the level of the base of the epidermis is lined by two layers of cells as in man; in the epidermis it appears to resemble the epidermic portion of the sweat-duct of man in being without any proper wall. While the sweat-glands in the different animals resemble each other in structure, they vary very much in their form. In some animals the tube of which the gland-portion is composed is but little coiled, in others there does not appear to be a coil-arrangement, but the gland-portion runs by the side of the hair in a wavy or spiral manner. Thus, in the horse, the gland-portion consists not only of a vertically elongated coil situated deep below the bases of the hair-follicles, but also forms a considerable portion of the tube which passes up from the coil to the surface. In the dog the gland-portion is arranged more in a spiral than in a coil, and runs by the side of the hair to within a short distance from the surface where it joins the short duct. In the mole the gland-portion is arranged in a curve, or forms about one turn of a coil.

The lumen of the gland-portion is exceedingly wide in some animals, for instance the pig, sheep, hedgehog ; is small in others. The duct-portion is long in some animals, for instance the pig, ox ; is short in others, as in the dog.

The opening of the sweat-ducts of the animals I examined is in nearly every instance closely related to the mouths of the hair-follicles. In those animals whose hairs are arranged in an isolated or grouped manner the sweat-duct opens either close to or actually into the mouth of the hair-follicle. In the ox the sweat-duct opens into the outer part of the mouth of the hair-follicle ; in the horse the duct opens close beside the mouth. In those animals in which the hairs are arranged in bunches the sweat-ducts open into the common tubular depression at a variable distance from the surface of the skin, but always a little above the opening of the sebaceous gland.

I come now to the action produced by osmic acid upon the sweat-glands. I could not discover, except in a few instances, any blackening of either gland- or duct-portion in the animals I examined. The cells of the gland-portion contain in many instances minute granules which are not blackened by osmic acid ; in the same section the granules in the cells of the sebaceous gland are deeply blackened. In the horse the cells of the gland-portion contain a great number of these unstained granules.

The exceptional instances in which I found blackening of the sweat-glands are the following :—In the ox I found in a few sections what is best described as a plug of blackened substance at the orifice of the sweat-duct. It seems almost certain that this blackened substance is sebaceous matter which has found its way into the opening of the sweat-duct, as blackened sebaceous matter can be traced from the sebaceous gland along the hair, and is continuous with the blackened matter in the sweat-duct opening. In one section of the skin of the back of the dog I found in one gland-tube a little mass of blackened substance, evidently fat. It is possible that this mass of fat may have got accidentally into the gland-tube (as Professor Alfred Scott suggests) in the process of cutting the section, as in the subcutaneous tissue of the dog there is a considerable amount of fat, and in many instances one can see not only in sections of the dog's skin, but in those of the skin of other animals which possess much subcutaneous fat, scattered fat spherules blackened with osmic acid here and there

on the surface of sections of gland-tubes, and on the surface of other structures, such as muscles. At any rate, out of a large number of sections of the skin of the dog's back I only found this one isolated instance of fat in the lumen of a gland-tube. At the orifice of a sweat-duct in one section I found some blackening, but I think this is due (as in the ox) to sebaceous matter which had found its way into it. In one section of the back of the hedgehog I found a few blackened spherules in the lumen of one sweat-gland tube. In the other sections, which were very numerous, I found no blackening of either gland- or duct-portion.*

3. *The Subcutaneous Fat.*—The amount of subcutaneous fat varies very much in the different animals; thus it scarcely exists in the skin of the rabbit, while in the back of the pig it is very abundant. I examined carefully to ascertain whether Unna is correct in regarding the columns of fat which ascend into the skin from the subcutaneous tissue as in relation more to the sweat-glands than to the bases of the follicles. In those animals which have numerous sweat-glands it is impossible to pronounce with certainty, as the sweat-glands run alongside of and reach below the hairs; but in the otter, in which I found no sweat-glands, columns of fat ascend in a most regular and beautiful manner from the subcutaneous tissue to the bases of the hair-follicles; this fact is a strong argument in favour of J. Collins Warren's view as to the arrangement of the fat columns being the correct one. There is no doubt, however, as Unna points out, that fat-cells are present in greater or smaller numbers between the coils of the sweat-glands.

I shall now describe what I found on examination of special parts of the skin. I examined the snout of a pig, the axilla of a sheep, the groin of a ferret, the pad of a cat's foot, the sole of the foot of a badger, the axilla and groin of a guinea-pig, the palm of a monkey, and the scalp, axilla, palm, and sole of the foot of man.

In the pig's snout the sebaceous glands were deeply blackened centrally with osmic acid. The sweat-glands, whose gland-portion forms a close coil, are remarkable in possessing a very long duct

* In all my osmic acid sections the tissues were stained a light oak-brown colour; this browning by osmic acid of the protoplasm of the tissues must be carefully distinguished from the black colour produced by the reducing action of fat upon osmic acid.

which has an unusually wide lumen, wider than that of the coil. The cells lining the gland-portion contain numerous granules; these granules were not blackened by osmic acid. In the axilla of the sheep the sweat-glands were not blackened with osmic acid. In the groin of the ferret the cells lining the gland-portion contain minute granules; these granules were not blackened with osmic acid while the cells of the sebaceous glands became deeply blackened. The sweat-glands in the pad of the cat's foot and in the sole of the foot of the badger are very numerous; the cells of the coils and ducts were not stained with osmic acid, nor could I discover any blackened matter in the lumen of the tubes. I failed to find sweat-glands in the groin and axilla of the guinea-pig. The sweat-glands in the monkey's palm were not blackened with osmic acid. In the human axilla the cells lining the coil contain granules unstained by osmic acid; in one section, however, I found a few blackened granules in some of the cells of the coil, and in another section a few dark granules were found in the lumen of one sweat-coil. In the human palm the cells of the sweat-coil contain granules which do not stain with osmic acid. In the sole of the human foot I could not detect any blackening of the sweat-glands.

Assisted by Mr. Wallace Eustace, I made two different clinical experiments, in order to ascertain whether fat is secreted by the palm of the human hand.

I washed the palm of the hand of a woman suffering from nephritis with 1 per cent. solution of caustic potash, then with distilled water, then with a mixture of an equal quantity of absolute alcohol and ether, and finally with ether. By this means I endeavoured to remove any extraneous fatty matter. I then gave the patient a hot-air bath, taking care that during the time she was in the bath (about three-quarters of an hour) she held the palm of the cleansed hand open, directed upwards, and above the level of her body, so that no sweat could trickle down from the forearms or from the back of the hand on to her palm. When the palm had been sweating for some time I removed some of the sweat with the blade of a knife previously cleansed with liquor potassæ, water, and ether; I scraped the surface of the palm gently when removing the sweat. Some sweat I put on one slide, covered it, and examined it dry; some I treated with osmic acid, running the osmic acid in under the cover-glass. In neither

specimen could I find any trace of fat. I repeated the experiment with another patient, and again failed to find fat.

The second experiment I made was that suggested by Heuss to demonstrate fat in the sweat-glands of the palm of the hand. Professor Walter Smith kindly referred me to Heuss's paper on the sweat-glands. By means of a pad and gutta-percha paper and a bandage I fastened on the palm of a woman's hand, cleansed with ether-alcohol, a small piece of clean white writing-paper, previously washed with ether, and left the paper in contact with the palm for five hours. I then soaked it in 1 per cent. solution of osmic acid. This paper was certainly darkened by the osmic acid, and here and there a few black spots could be seen; but I failed to obtain a regular arrangement of black dots to correspond to the mouths of the sweat-ducts, such as Heuss states can be obtained by this procedure.

As the paper I used was sized, and might, perhaps, have been unsuited for this experiment, I repeated the experiment, using the purest filter-paper instead of the writing-paper. I repeated the experiment with two patients, and took special care to cleanse their hands from all extraneous fat. I washed the palm of the hand of each patient with the following, and in the order given:—soft soap dissolved in spirit, distilled water, 1 per cent. caustic-potash solution, distilled water, equal parts of absolute alcohol and ether, distilled water, and finally ether. I then fixed on the palm, by means of a compress, a piece of filter-paper, previously washed in ether. I left the paper in contact with the palm for six hours in the one patient, for five hours in the other; I then placed the papers in 1 per cent. osmic-acid solution, and left them in that solution for half an hour. As a control experiment I placed in 1 per cent. osmic-acid solution a third piece of filter-paper which had simply been washed in ether. The three papers had exactly the same appearance when taken out of the osmium solution; they were not perceptibly altered by the osmic acid, and I failed to find the black dots which Heuss describes upon the two papers which had been applied to the palms.

I shall conclude by considering in the light of these observations the evidence for and against Unna's views:—

1. Are the sebaceous glands solely for the lubrication of the hairs, and not for the general oiling of the body?

It cannot be denied that their anatomical relation to the hair-

follicles shows that part of the function is to lubricate the hairs, and this lubrication would be specially useful in the case of aquatic animals. But this is not necessarily their entire function ; for,

(a.) On the nose are sebaceous glands of large size connected with hair-follicles of very small size. If sebaceous glands have for their sole purpose the lubrication of the hair their size ought to be proportionate to that of the hair. Moreover, the sebaceous glands which open into the follicles of the spines of the hedgehog are minute ; if their function be solely to oil the spines the secretion of these minute glands would be quite inadequate to perform this function. Beneath the chin of the cat the sebaceous glands are enormous and numerous ; their size is altogether disproportionate to the size of the hair. I am indebted to Professor Alfred Scott for this last observation.

(b.) There are sebaceous glands which open directly upon the surface and are not connected with hairs. Unna admits that there is warrant for ascribing the lubrication of the surface to the sebaceous glands of the mucous orifices.

2. Do the sweat-glands secrete fat ?

In reply to a letter I wrote to Dr. Unna in October last I received from him the following statement of his views regarding the secretion of the coil-glands :—"I believe that the coil-glands store up fat in the time of rest which is washed out during the active state, and then give for a time a mostly watery secretion. The fat in them is always to be demonstrated by good osmic-acid staining, partly as granules in the coil-epithelium, partly imbedded in the cuticle of the whole duct and the horny layer of the epidermis."

The evidence that osmic-acid sections of the skin afford that these glands secrete fat is, as far as my observations go, very meagre. In only a very few sections (as I have already stated) could I find evidence of fat in either the cells of the gland- or duct-portion, or in the lumen of the tubes themselves.

Unna's argument, derived from clinical observation, that the function of the sweat-gland is to secrete fat, namely, that in cases of severe acne vulgaris the hair-follicles may be generally plugged with sebum and yet the face may be oily, is a strong one ; yet it is very doubtful if universal follicular plugging ever occurs, and the sebaceous glands whose orifices are not obstructed could therefore oil

the surface, especially as, in acne, their secretion is generally in excess.

Unna's view is certainly strongly favoured by the absence of sebaceous glands from the palms and soles, as if these parts are lubricated the sweat-glands alone can do it, but the two clinical experiments I made, and which I have detailed, failed to prove the presence of fat in the sweat of the palm.

3. Is the watery sweat derived not from the coils but partly from the vessels which surround the duct in the corium and partly from the intercellular lymph of the epidermis?

This view is opposed to physiological investigation, which has proved that the secretion of watery sweat is under nervous influence, and is to a great extent independent of vascular dilatation. Of course, if it were proved that lymph is a secretion, and that there are special secretory nerves in that part of the sweat-duct which is situated in the corium, Unna's view, as far as physiology is concerned, might be accepted.*

Unna's statement that in the dog the sweat-glands open into the hair-follicles, and not on the surface of the skin, implies that he believes the arrangement by which the duct opens is different from that in other animals, and that its opening does not communicate with the intercellular lymph-spaces, and is not therefore an outlet for the lymph which is present in the epidermis. If Unna means to imply this he is certainly in the wrong: for the sweat-duct in the dog opens practically on the surface, as I stated before, and its duct passes through the cells of the rete without any proper walls. Moreover, in the back of other animals, some of which undoubtedly sweat, the sweat-ducts open into the mouths of the hair-follicles.

4. Is the subcutaneous fat secreted by the sweat-coils?

I think this is most unlikely. The amount of that fat does not appear to be at all proportionate to the number of the sweat-glands;

* Dr. Purser adduces, as a very strong argument against the possibility of the watery sweat being derived from the intercellular fluid of the epidermis, the fact that that fluid is of an albuminous nature, whereas the sweat contains no albumen. The epidermic portion of the sweat-duct having no proper wall, there are, of course, no secreting cells to keep back the albumen and prevent it from entering the duct.

e.g., in the otter there is a considerable amount of subcutaneous fat, and yet I could not discover any sweat-glands. Moreover, how are we to account for the origin of fat in other parts of the body than the skin?

From all these observations I am disposed not to accept Unna's view of the function of the sweat-glands.

CLINICAL NOTES ON CASES FROM PRACTICE.

BY W. ALLAN JAMIESON, M.D., F.R.C.P. EDIN.,

*Physician for Diseases of the Skin, Edinburgh Royal Infirmary. Lecturer
on Diseases of the Skin, Edinburgh School of Medicine, &c.***1.—LUPUS ERYTHEMATOSUS IN A GIRL AGED EIGHT YEARS.**

IN some remarks made at the International Congress of Dermatology, held at Vienna last year, allusion incidentally occurred to an instance of lupus erythematosus at an exceptionally early period of life. Some more complete details may prove of interest.

M. C., aged eight, resident in Edinburgh. She is a fair-haired child, of a rather timid disposition, well enough grown for her age, and in good, though not robust, health. She used to suffer in winter from chilblains on the little toes, but not on the hands or ears. The family history is satisfactory on father and mother's side, but her mother has lost three children, two from bronchitis in infancy, and one from some nervous ailment, possibly tubercular meningitis, since she died in convulsions. As a result of exposure to the sun on one of several hot days which we had in June, 1892, a red spot appeared on the nose, and others have shown themselves more recently. There is now a symmetrical bat's-wing erythema on either cheek, of a vivid, well-defined, pink hue, joined by a fainter band across the bridge of the nose. There are some isolated crimson, slightly elevated spots on the forehead and chin, arranged with tolerable regularity. The ears are swollen a little, and studded with red erythematosus blotches like the cheeks. There are also many patches on the backs of the hands, and on the forearms, some pin's-head sized, some as large as a threepenny bit, and there are similar but more superficial blotches on the palms. None occur on the trunk, but the three outer toes on both feet are swollen and red. At this time—11th August, 1892—there was no distinct scaliness, nor any

evidence of cicatrization. Though the eruption is said to itch at times, and occasionally to feel hot, as a rule she makes but little complaint about it. She was ordered a more nourishing diet, as her appetite had been of late rather capricious, to take capsules of ichthyol, containing five minims in each, thrice a day, and to apply locally a lotion containing potassa sulphurata, sulphate of zinc, glycerine and peppermint water. She was not again seen by me till the 14th of October, 1892, when she was practically well. In the interval, however, she was attended by Dr. Robertson, then my clinical clerk; thickish scales formed on the patches on the face and arms, and an erythematous rash, in some respects like that of scarlet fever, developed on the chest, and after a time faded. The ichthyol was continued throughout, but for a time an ointment of ichthyol five minims, ammoniated mercury ten grains, lanoline an ounce, was applied. This removed the scales, and rendered the patches smooth. Subsequently a calamine lotion was employed. The situations formerly occupied by the patches of erythematous lupus on the bridge of the nose, cheeks, forearms, backs of the hands and feet, are now represented by a faint but uniform, white, very superficial scar, round which the skin is a little more pigmented than beyond, imparting an appearance not unlike leucoderma. The spots on the chin and ears have left no trace. The tips of the fingers have peeled, and though the epidermis has been restored, the skin is tender. On the 5th of January, 1893, the pigmentation had considerably faded, but in parts the hue of the skin was darker than was natural in so fair a child. The scars were still distinct, though they, too, seemed to have become fainter, and were not markedly observable save in a clear light, giving rise to the anticipation that eventually they would wholly disappear.

2.—LUPUS ERYTHEMATOSUS IN A VERY WIDE-SPREAD FORM.

M. F., fifty. The wife of a miner residing in a colliery village in county Durham. She was brought under my notice by Mr. Wilson, a student of medicine, who happened to be assisting the medical officer to the colliery in the autumn of 1892. She was admitted into Ward 38 on the 24th of October, 1892. She is extremely thin, the skin ill-nourished, dry, and pigmented to a deepish brown hue, suggest-

ing a cachectic state; but her general health is fairly good. She had smallpox twenty-one years ago, and has never been so strong since. She has six children living, four have died, and she has had two miscarriages. One child died of tubercular meningitis; another was hydrocephalic. She had a pretty severe attack of erysipelas nine years ago, affecting the head and face; the hair fell off, but was restored for some time previous to her present illness, which began two and a half years since. Her skin used to perspire on exertion and at other times; it does not now sweat at all, but she constantly feels cold and shivers readily. The early history of her ailment cannot be fully elicited. It commenced, however, on the face and backs of the hands as blotches, and gradually spread to the arms and body. The scalp is atrophic and the integument cicatricial in appearance; the hair has in great measure fallen off; what remains is thin, dry, wiry and feeble. The skin of the face is particularly thin when pinched up; the eyebrows are almost entirely gone, the eyelashes scanty. On the forehead are numerous superficial erythematous patches, of a mottled pink, which fade wholly on pressure, and are only slightly scaly. On the eyebrows there is rather a diffuse redness, including here and there what seem to be faint scars. The cheeks and sides of the face as far as the ears are pretty uniformly reddened; this extends as a band across the malar region to the nose, leaving the eyelids and the skin immediately beneath the eyes unaffected. The nose is nearly all red, looks somewhat pinched, while the redness extends over the upper lip, and appears as a blotch on the centre of the chin. The ears are reddened, atrophic and dry. The skin of the neck is yellowish and is tolerably thickly set with erythematous patches and spots, and similar ones are scattered over the upper portion of the chest in front. There are symmetrical blotches on the back of each phalanx and a large one on the dorsum of the hand, while there are many on the arms, especially on the outer aspect. Two large areas, presenting similar appearances, occupy the centre of the back, one between the scapulæ, another and still larger over the lower dorsal and lumbar regions. All parts implicated are covered more or less extensively with either fine and small, or large and thin, epidermic scales, which are pretty firmly attached. She was treated during the seven weeks she remained in hospital with ichthyol internally, five minims in capsule thrice a day,

and cod-liver oil at bedtime. At one time the dose of ichthyol was increased to ten minims, three times daily, but diarrhoea supervened; the ichthyol had to be discontinued and astringents substituted, till the latter symptom ceased, when the ichthyol was resumed in the original dose, which was well borne. Locally she had warm baths and calamine lotion, or that containing potassa sulphurata and sulphate of zinc, either of which agreed. A 2 per cent. resorcin, salicylic acid, and ichthyol vaseline starch paste, which was tried, had speedily to be laid aside, as it caused pain, redness, and aggravation of the disease. When she was discharged on the 14th of December, 1892, she had gained in weight and plumpness, had lost the cachectic aspect she presented when admitted; and though none of the patches could be said to have wholly disappeared, many were fainter and smoother, the face had lost its pinched condition, and white and soft scars had in places formed; the most marked improvement had occurred on the back.

3.—LUPUS ERYTHEMATOSUS DISCOIDES.

Miss M., aged 23. Sent to me by Dr. McLelland of Alexandria. She was a fairly well-grown young woman, who has had no severe illness, though she suffers occasionally from neuralgia. No delicacy of chest known in family. The present complaint commenced thirteen months before she came to consult me on the 12th of May, 1891. There are at present five patches, it is then noted, one on right cheek, one on right side of nose, and three on left cheek, each round and about the size of a shilling. To superficial observation they are more like a blister than anything else. There is a red blotch, elevated at the edge, with a depressed centre, covered with a thin crust. The red margin fades pretty sharply into the hue of the surrounding skin. At a little distance the patches have an appearance somewhat like the bruise on a peach. They burn at times, but do not itch. The condition is extremely disfiguring. There are also some erythematous blotches on the flexor aspect of the joints of the fingers. She was ordered an ichthyol starch and carbolic paste to apply at night, and a lotion of potassa sulphurata, &c., similar to that prescribed for Case 2, to be painted on in the daytime. I did not again see her, but Dr. McLelland has kindly furnished me with some notes of the

progress of her complaint. Writing on the 31st of January, 1893, he says:—"She continued your treatment for three or four months; during the first six weeks there was marked improvement, but this did not continue long, and the face assumed the appearance it had when you saw it. I saw her once or twice while she was using your applications, and kept urging her to attend to your instructions, but after a time it was abandoned. A few months since she married, and had an abortion at two and a half months. The disease has not extended, and is much as when she consulted you. At present she is applying a lotion of perchloride of mercury [five grains to the ounce] and is taking arsenic internally. Improvement has decidedly taken place, but it is to be feared she will shortly tire of treatment, and do nothing."

Little having any bearing on the etiology of lupus erythematosus can be deduced from a study of these cases. The first is remarkable from the youth of the patient, the second from the extensive distribution of the eruption, and the third from the peculiarity of the lesions. While it may be impossible at present to prove any direct connection with tuberculosis, there is in lupus erythematosus certainly something more than persistent erythema. The obstinate pertinacity with which the process in so many instances resists all treatment, argues a deep trophic lesion, and it may turn out that there is a tuberculosis of the nerve trunks. My examination of sections from patches has brought out that while the inflammatory phenomena, as shown by cell emigration, are scanty in the superficial portions of the corium, the papillary layer and that part immediately subjacent, they are remarkably abundant at its deeper part, ceasing, however, at once and absolutely when the texture becomes looser. The cicatrization, often so marked a feature at least for a time after the subsidence of the acute stage, is probably due to this intense and localized inflammation, giving rise to tissue changes which produce an atrophy of the deeper parts of the corium, with ultimate condensation, contraction, and obliteration of vessels.

This, of course, is not incompatible with the view expressed by Mr. Malcolm Morris* that lupus erythematosus is an inflammatory affection belonging to the erythema group, though a distinct "pathological

* *British Journal of Dermatology*, Nov., 1892.

entity," and the designation he suggests, erythema atrophicans, has much in its favour, as involving less of a theory than lupus erythematosus. The latter term has use and wont in support of its being retained for the present, as any day we may have a complete explanation of the morbid process furnished by some one of the earnest band of workers in dermatology.

In the treatment of lupus erythematosus we make use of remedies directed against the compound disease. Thus those applications which relieve capillary dilation are employed to correct the erythematos element, and on the whole the formulæ most efficacious in rosacea do the greatest good. But behind and in addition to these destructive agents are recommended by nearly all, pyrogallie acid, carbolic acid, salicylic acid, ethylate of sodium, erosion, scarification. In fact "the true nature," to quote Dr. Pye-Smith,* "is shown by the treatment which dermatologists, whatever name they give it, are led to adopt."

* Introduction to the "Study of Diseases of the Skin," 1893, p. 301.

CURRENT LITERATURE.

A CASE OF MELANO-MYCOSIS OF THE SKIN, WITH REMARKS, &c.

SHERIDAN DELÉPINE. With Plates IX. & X, and Fig. 22. (*Trans. Path. Soc.*, 1891, pp. 424-57.)

THE case was one of fractured femur, admitted May 11, 1890, in which the leg was strapped from ankle to knee with soap-plaster, over which was a cotton bandage, which covered the foot also. On removal of the strapping, June 18, two patches of sooty material were noticed, each having an ulcer in its centre, the upper ulcer occupying the site of an old scar. These soon healed with washing and boracic dressing. Elsewhere beneath the sooty deposit the cutis was sodden and the epidermis peeled easily. A shred examined microscopically showed dark brown round bodies from 8-5 to 6 mm. in diameter, resembling red blood-corpuscles, some spherical, others flattened, while many were crenated.

On cultivation for a few days in nutrient gelatine at 20° to 28° C. a mould was produced according with Flügge's description of *Aspergillus niger* (p. 119). This is a mould varying widely in character with circumstances, its conidia being the most constant element, though these, too, in this and in other *Aspergilli* vary in size with the amount of moisture present, and perhaps also with different forms of growth and activity.

In studying the pathogenic significance of varying form and functions, Mr. Delépine claims obvious advantages in having to deal with an organism which (1) is a *facultative* parasite (De Bary), *i.e.* a saprophyte which can become parasitic under appropriate conditions, and which (2) has a definite biological status.

In this case pathogenic properties were suggested by the fact that ulcers healed when the fungus was removed, though proof is wanting of the absence of other germs and of successful inoculations with pure cultures. After quoting recorded cases of lesions resulting from kindred *Aspergilli*, Dr. Delépine gives the results of inoculation of two rabbits with *Aspergillus niger*, one by subcorneal, the other by intraperitoneal injection. The ocular injection produced conjunctivitis with photophobia, while the anterior chamber contained peripherally a white, opaque, but not puriform material, seen post-mortem forty-eight hours after injection to consist of epithelial-looking cells, with a few swollen spores. The peritoneal injection was followed by no serious symptoms, and post-mortem forty-eight hours after injection no general peritonitis was found, but at the seat of puncture and elsewhere were numerous tubercles $\frac{1}{2}$ -4 mm. in diameter, many showing a central blackish material. Some of the mesenteric glands were enlarged and congested and contained spores. All the tubercles contained spores, each group surrounded by a ring of altered leucocytes, and these by a layer of embryonic connective tissue formed by multiplication of the fixed elements. In the case of the liver there was considerable degeneration of the neighbouring liver-cells. With all

this activity, however, there was no mycelium, the spores resembling embedded specimens, which in absence of air grow very slowly. The absence of bacteria was proved by appropriate staining. Hence the lesions would appear due to an irritant, early formed in the germinating spores, before any possible mechanical action of mycelium.

On two occasions chance inhalation of the spores quickly produced in Mr. Delépine intense coryza and conjunctivitis, with fever and headache, followed next day by slight bronchitis.

Conditions required for the parasitism of the fungus are (1) high external temperature; (2) moisture due to retained secretions; (3) inactivity or lowered vitality of parts affected. Thus, in the present case, the fungus grew (1) in summer; (2) under impermeable plaster; (3) in part on the scar of an old ulcer. Inoculation of skin or plaster must have occurred just before strapping.

As bearing on the interrelation between the condition of the parasite and that of the host, numerous cultivations were made by various methods (drop, test-tube, &c.), (a) on the usual nutrient media, (b) on various simple substances (proteid, carbohydrate, &c.), and (c) on animal tissues (muscle, fat, horny epithelium), at temperatures varying from 10° to 45° C.; with and without admission of air, and with varying degrees of moisture. The effect of temperature on the vital concurrence of *Aspergillus niger* and *Penicillium glaucum* was noted. Summarizing his results, Dr. Delépine gives the following facts.

1. The typical development of *Aspergillus niger* under favourable circumstances is as follows:—

First two to three hours.—Peripheral distribution of pigment and its escape from spores.

6th to 12th hour.—Bright spots formed in spores, followed by conical buds, from which arise hyphæ, some with transverse septa. In such hyphæ cell-wall well marked in proximal, not seen in distal segments, nor in lateral buds.

12th to 18th hour.—Formation of mycelium bearing aerial hyphæ with clubbed extremities (conidiophores), from which bud forth slender, radiating sterigmata, some branched. Conidia produced by terminal constriction of these. The conidiophores and a few of the mycelial filaments are of a bright yellow colour. The early stages of growth impoverish the soil. Thus, where spores are few, each resulting group of hyphæ grows separately, as avoiding the soil impoverished by neighbouring groups. The more numerous the spores, the more slender the hyphæ. Where large groups of spores are ill supplied with air and moisture only a few germinate. In later stages, on the other hand, conjugation takes place at times between neighbouring filaments, evidence of altered properties.

Within 1st week.—Mycelium increasing in density; older filaments have lost their protoplasmic contents. Cells of superficial filaments become vacuolated and broadened, sometimes giving the thread a moniliform appearance. Conidia more and more deeply pigmented, sometimes crenated from projections of pigment. If undisturbed, they tend to form long chains.

2. Reviewing several variations from this type, Dr. Delépine finds that, “by *modifying the pabulum*, it is possible to obtain several varieties of *Aspergillus niger*:— (1) One with pretty equal production of vegetative and reproductive elements (potato); (2) one with an excess of reproductive elements over the vegetative (muscle, glycerine, agar-agar); (3) one with a great excess of vegetative over the reproductive elements (mucilage). In addition, the mycelium may be made to

develop a *bright yellow pigment* (potato, glycerine, agar-agar). The mycelium may be made to cover rapidly large areas with a *sporadic production of conidiphores*. Mycelium and conidia may be made to grow intermittently in excess of each other, so as to produce an appearance similar to that known under the name of '*fairy rings*' (glycerine, nutrient gelatine). *These varieties are particular to the nutrient media*, since conidia obtained from any of these cultivations will give rise to new colonies, having types corresponding to those described above when grown on each special medium."

3. As to temperature, the fungus will not grow below 15° C. nor above 40° C., save on the most favourable media. From 15° to 40° C. growth steadily improves, varying always also according to the medium.

4. As to the vital concurrence between *Penicillium* and *Aspergillus*, at 20° to 25° C. both grow equally well, lower temperatures producing more *Penicillium* and less *Aspergillus*, higher the reverse.

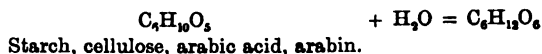
5. The presence of moisture favours, its absence stunts growth.

6. As regards the influence of air, the fungus is *aërobic*, but will grow beneath the surface of gelatine with a difficulty proportional to the depth and with attenuated filaments: if the depth be as great as 2 mm., little or no growth is usually found at the end of the first day. When occasionally a spore germinates at as much as 10 mm. from the surface, the filaments are no thicker than *Bacillus anthracis* in the *Leptothrix* stage, reaching the normal size as they approach the surface. Mycelium kept beneath the surface grows on without producing conidia, as seen in the earlier (submerged) stage of growths in fluid media.

Of the *effects* of the growth of *Aspergillus niger* on the different media the following table is given:—

Nutrient Material.	Products found after cultivation of <i>Asp. niger</i> .
Pure cellulose	Glucose.
Pure starch	Glucose.
Best gum arabic	Glucose, oxalic acid, acetic acid.
Best gelatine of commerce .	Gelatose (gelatine peptones?).
Solidified hydrocele fluid .	Proteoses (peptones?).
Glycerine, peptone gelatine .	Oxalic acid, abundant.
" " " " .	Crystalline extractives replacing ultimately nearly the whole gelatine.

All the above are produced either by digestion (gelatoses, gelatine peptones by hydration of gelatine; proteoses, peptones by hydrolysis of albumens) or by regressive metabolism (oxalic acid, &c.) The formation of glucose may be thus given:—



Oxalic acid, obtainable by oxidation of starch, cellulose, &c., was only evident in these experiments where lime was present. Air was necessary to its formation, the fungus, when embedded, producing no crystals of oxalate of lime. The appearance of typical crystals of oxalate was preceded by other forms soluble in water, but thrown out of solution in the cell by compounds unknown. The

crystals of oxalate ultimately formed with the mycelium a crust on the top of the culture.

The extractives were due to action continued beyond peptonization, and were seen on evaporating a drop of the liquefied gelatine.

The growth of *Aspergillus niger* has, moreover, been connected with *gallic acid* fermentation (Van Tieghem, 1868), and with the *intersion of sugar* (Fernbach, 1889) by a diastatic ferment, *sucrase*.

Such an universal hydrolytic power could, on present views, only be due to a host of enzymes, which, in an organism consisting mainly of similar cells, would be presumably all produced in each cell; which seems unlikely. And though, again, the isolation of definite ferments in other cases suggests a multiplicity of ferments in this, yet it may fairly be held that such bodies are by total separation from the cell somewhat degraded towards the level of ordinary chemical reagents. Fernbach shows that *Aspergillus* imparts fermentative power to the surrounding medium in considerable quantity only when cell-activity is on the wane and the total quantity of *sucrase* is diminishing. Hence Mr. Delépine suggests that the activity of enzymes apart from the living cell may, perhaps, have been exaggerated.

A bibliographical index is given.

ARNOLD BILL.

URTICARIA. M. WILLIAM DUBREUILH. (*Gazette des Hôpitaux*, Oct. 22, 1892.)

THIS is an exceedingly able and interesting paper. The author commences by giving a general description of the malady, and after mentioning its various causes, he proceeds to detail some of its varieties.

In discussing urticaria papulosa, he does not agree with Colcott Fox in saying that this is the only form of urticaria which shows itself, or is peculiar to infancy, as the author has seen two cases, the one occurring in a boy of fifteen, and the other in a woman past thirty.

With regard to bullous urticaria, contrary to the opinion of Max Joseph and Riehl, he thinks that *U. gigantea* and acute circumscribed œdema are not synonymous, but represent two morbid types united by insensible gradations. He then proceeds to describe types of each.

Urticaria affecting the internal mucous membranes is next discussed, and many very interesting cases are related, amongst others, that affecting the gastric mucosa reported by Pringle. With regard to the causation of urticaria by drugs, the author states that the list is too long to mention them all, but selects santal, quinine, and iodide of potassium. He refers to urticaria following upon puncture of a hydatid cyst of the liver, and quotes Dieulafoy as showing that it often appears during the course of hydatid disease without any puncture, probably owing to absorption, as shown by Debove, who succeeded in inducing an attack of urticaria in a healthy man by the subcutaneous injection of pure filtered hydatid fluid. He next discusses the question of urticaria with reference to ague and the exanthemata.

Various methods of treatment are then detailed, but, in the main, he falls back on the old axiom, "where possible, treat the cause." One point is worthy of note; he advocates a trial, in cases of urticaria giving rise to alarming symptoms, of massage of the skin combined with a warm foot-bath and sinapisms to artificially induce an external urticaria and thus withdraw it from its deeper seat.

H. W. MARETT TIMS.

MULTIPLE SARCOMATA. History of a case showing modification and amelioration of symptoms under large doses of arsenic. SAMUEL SHERWELL, M.D. (*American Journal of Medical Sciences*, October, 1892.)

A VERY interesting case of the above is recorded in a man æt. 39, who had a large ulcerating tumour on the lower posterior portion of the left thigh, which was removed, and on microscopic examination was found to be a sarcoma. Within a month afterwards another small, quickly ulcerating tumour appeared on the right thigh just below Poupart's ligament. This the patient refused to have removed. During the next three months many others appeared on both nates, sides of chest, over the shoulder and on the arms: these developed rapidly. Finally, with the patient's consent, about thirty tumours of varying size were removed. Thirty-six hours after operation, arsenic was administered and given in increasing doses; many of the small tumours which had not been removed rapidly disappeared. The patient did not persist with the treatment, and later on returned "covered with sarcomatous growths, extremely exhausted and hyperæsthetic." He was then operated upon four times at intervals of two or three weeks, 170 tumours in all being removed. They then began to appear more rapidly than ever. Arsenic was again administered, and in about four weeks no new growths had appeared, and the old ones were diminishing in size, and shortly afterwards "not the faintest sign of a malignant growth was left," except a few on the face and scalp which seemed to resist the arsenic.

As the patient began to show symptoms of poisoning, the arsenic was stopped for ten days, during which time about a dozen new growths had appeared on the trunk and limbs. Resuming the arsenic, a similar favourable result followed. The patient was lost sight of, and died six months afterwards from exhaustion and recurrence, the remedies having been apparently neglected.

There was a marked tolerance of the drug, the patient sometimes taking as much as a grain of arsenious acid a day.

The treatment instituted was original, the author, at the time of its commencement, not being acquainted with the writings of Köbner and others in the same direction.

H. W. MARETT TIMS.

TRICOPHYTOSIS OF REGIONS WITH THICK HORNY EPIDERMIS.

M. DJELALEDIN MOUKHTAR. (*Bulletin de la Société de Dermatologie*, Jan. 28, 1892.)

CASE I. commenced as a few pimples on the sole of the left foot near the base of the toes; then became vesicular, of a yellowish colour, and surrounded by an erythematous zone having the appearance of dysidrosis. The raised epidermis became broken in the centre, showing a somewhat violet-coloured surface surrounded by dry epidermis. Patches united and gradually spread to the spaces between the toes, then on to their dorsal surface, and finally on to the back of the foot, in which situation their appearance was more furfuraceous.

Microscopic examination revealed the *T. tonsurans*.

The origin is doubtful; the patient had been riding horses barefooted, but the animals were not known to be affected. It was also noticed that he put his socks on either foot indifferently, but the right foot was unaffected.

CASE II. was characterized by a similar vesicular eruption in the palm of the hand. On microscopic examination the parasite was found in abundance.

In the same journal of a later date (March 10th), the author gives another case attacking the sole of the foot of six years' duration, and simulating a syphilitic eruption. It commenced on the dorsal surface of the great toe, and it was four years before it spread to the plantar surface of the foot. The diagnosis was confirmed by the microscope.

The author draws attention to many points in the differential diagnosis between this disease in these situations and dysidrosis, eczema and syphilides, all doubtful cases being examined microscopically.

H. W. MARETT TMS.

THERAPEUTIC NOTE.

ICHTHYOL IN DISEASES OF THE SKIN. Prof. E. SCHWIMMER, Buda-Pesth. (*Wiener Medizinische Wochenschrift*, Nos. 29 and 30, 1892.)

Prof. SCHWIMMER attributes the remedial action of ichthyol, *i.e.*, the sulpho-ichthyolate of ammonium, the most generally used salt, to its reducing and astringent properties, and emphasizes the combination of sulpho-acids with the tarry products which ichthyol to a great extent contains.

He gives his experience of the drug in the following skin diseases:—

(1.) *Various forms of erythema*, although these are regarded as of neuro-pathogenic origin, and therefore not likely to be influenced by local treatment. Prof. Schwimmer gives details of a case of a woman, ætat. 35, suffering from erythema of the extremities and trunk. The patches were well defined, exudation considerable, and in some places blebs were present, but confined to the extremities. At first treatment was purely expectant, on the seventh day a solution of ichthyol was painted over the affected area and starch powder applied. Complete cure took place in the course of a week. He also states its efficacy in erythema circinatum et iris, and found by contrast-treatment with sulphur or bismuth ointment that ichthyol cured the patches more quickly in the same patient. As regards erythema nodosum, the results were not so striking, probably because of its rheumatic nature, although ichthyol certainly exerted a favourable influence over the nodules, rendering them less prominent and painful.

(2.) *Erysipelas*.—Ichthyol has a striking effect in ordinary so-called idiopathic erysipelas, and especially where this complicates injury or surgical treatment. He extols it over any other line of treatment hitherto adopted, and gives particulars of a case of severe erysipelas of the face where the œdema of the eyelids disappeared and the general health of the patient quickly improved after three days' application of a solution of ichthyol (ichthyoli 10 aquæ destillatæ 80 parts by weight). On the other hand, when erysipelas complicated skin diseases, *e.g.*, lupus after operation, the benefit of ichthyol was not so noteworthy; and the erysipelas itself exerted no remedial effect in such cases. In lupus Prof. Schwimmer considers the blood-vessels and the tissues to have undergone pathological changes of too severe a type to admit of any influence that erysipelas or ichthyol could exert over them. In simple erysipelas, where the changes, albeit produced by micrococci, are but slight in the vessels and tissues, the effects of ichthyol are nearly specific in character.

(3.) *Acne simplex and acne rosacea* show also favourable results after ichthyol. Before its application Prof. Schwimmer finds that the congested papules, pustules, and patches should be treated with a mild caustic paste (pasta decorticans).

R SULPHURIS PRÆCIPITATI.

β Naphthol	...	...	...	ââ	5 parts by weight.
Saponis viridis	...	...	...	10	" "
Adipis præparati	...	...	...	20-30	" "

This is applied at night for several days in succession and allowed to remain in contact with surface from one to two hours. It is then washed off and a dusting powder applied. In the course of a week or so desquamation is abundant, and the acne nodules are usually much diminished in size. Ichthylol solution is then painted on two or three times during the day, and at night it is applied in the form of ointment. In severer cases of acne rosacea, scarification may be necessary in addition. Ichthylol in such cases where hyperæmia is a marked symptom is strongly advised by Prof. Schwimmer. The following lotion may be used alternately with ichthylol in order to facilitate the action of the latter :—

R	Saponis viridis	...	...	...	50 parts by weight.
	Alcohol rectificati	...	...	100	" "
	Solve, deni filtra et adde				
	Sulphuris præcipitati	...	...	5	" "

(4.) *Eczema*.—Prof. Schwimmer found ichthylol in a 20% solution in water rather irritating in cases of diffuse redness accompanied by weeping, and it did not allay irritation. In chronic cases of eczema where redness is combined with desquamation this strength proved very efficacious, at times soothing the irritation and healing the skin rapidly. He cites a case of acute universal eczema which he first treated with Burrow's solution (liquor aluminii acetatis P.G.) diluted with ten times its bulk of distilled water during the acute stage, and when this was passed ichthylol solution allayed the irritation remarkably and cured the patient, no other application being used.

In intertrigo in children ichthylol was most successful. Prof. Schwimmer cautions against its indiscriminate application in eczema, and in all cases a small area should be first tested.

In psoriasis, sycosis, furunculosis, lymphangitis and dermatitis, in combination with other methods Prof. Schwimmer found ichthylol to be of distinct benefit in reducing inflammation and congestion, whether the result of previous treatment or not.

In a case of gonorrhœal synovitis of the knee and ankle inunction with a 20% ichthylol ointment and salicylic-acid plaster firmly applied in the course of a fortnight so improved the patient's condition that he was able to leave the hospital, walking without a stick.

The following combinations were used :—

80%–50% of sulpho-ichthylolate in distilled water or in oil of sesame, in vaseline, or this combined with lanoline.

ICHTHYOL VARNISH.

R	Ammonii Sulpho-ichthyolatis				
	Amyli	...	...	...	20 parts by weight.
	Aquæ destillatæ	...	...	50	" "
	Albuminis	...	...	½ to 1	" "

This varnish quickly dries, is non-irritating, and dispenses with dressings. It is easily washed off with water.

FRANK H. BARENDT.

THE BRITISH JOURNAL OF DERMATOLOGY.

MAY, 1898.

DO TRACES OF LEPROSY PERSIST IN FRANCE ? *

BY HENRI LELOIR,

Professor of Dermatology in the University of Lille.

[THE question, whether leprosy still exists in those European countries where it was thought to have disappeared, and more especially in France, is of such importance that the following extract from a paper by Professor H. Leloir will be, no doubt, of very general interest.

Speaking at the Paris Académie de Médecine, on February 21st, 1898, Professor Leloir recalled a case he had published in 1882. It was that of a young girl suffering from an unnamed affection which he described under the name of cutaneous and gangrenous patches, connected with some lesion of the nervous system, but which might also be held to be an example of genuine leprosy. Dr. Poncet, of Cluny, did not hesitate to call it leprosy, although Dr. Leloir himself preferred to class it with other cutaneous affections of nervous origin under the name of "gangrenous trophoneurosis of the skin simulating leprosy."

That young girl had been born in and had never left Paris.]

Professor Leloir then added: In my report on Leprosy in Norway, presented to the Ministry of Public Instruction in October, 1884, and published in June, 1885, I took occasion to remark on some very curious cases which I was then studying at Lille. One of them was seen by Dr. Thaon, of Nice, who expressed his great astonishment at the disease, which he pronounced to be leprosy. Dr. Poncet, of Cluny, was also of the same opinion. But in this, as in the other cases of which I shall speak presently, the patients were all French, born of French parents, and had always lived in France. Had the cases

* Epitome of a paper read before the Academy of Medicine of Paris, February 21st, 1898.

occurred in a country where the disease was acknowledged, they would certainly have been called leprosy; but in France the diagnosis takes a more or less problematical designation (on donne à ces affections le nom de "problème"). *Are they not a degenerated form of the old and true leprosy?*

In answer to this last question it will perhaps be better to relate the history of four different cases which in 1885 and 1886 I brought under the notice of the medical faculty of Lille, and designated "leproid trophoneuroses."

The first case observed was that of a man, aged 52. He presented some well-marked lesions, very similar to those of systematized nerve leprosy. One hand was almost transformed into a claw, while the other was so deformed as to resemble a seal's paw. Here we had disfigurement and mutilation of the feet, anæsthesia of the extremities, slight thickening of the ulnar nerves, neuralgic pains in the limbs, bullous and pemphigoid lesions over the limbs, and perforating ulcers of the soles.

This patient, born in the neighbourhood of Cambrai, had always lived in the North. (Departments of the Nord, Ardennes, and in Belgium.)

The second case was that of a thrasher (batteur en grange), æt. 46, and a pensioner of the General Hospital in the ward of my friends Dr. Olivier and Professor Dubar.

The symptoms of the disease were almost identical with those of nerve leprosy. Pigmented and leucodermic spots with more or less anæsthesia; distortion of the hands with atrophy of the muscles of the thenar and hypothenar eminences; distortion and mutilation of the feet and toes, greatly resembling what is seen in leprosy; anæsthesia of the extremities, accompanied by some zones of hyperæsthesia, pemphigoid bullæ, perforating ulcers of the soles, ulceration and ichthyosiform condition of the skin of the legs, violent neuralgic pains in the limbs, slight degree of palpebral alopecia, and slight thickening of the ulnar nerves.

I made a careful histological examination of the pus discharged from the cutaneous ulcerations as well as of a little morsel of skin surrounding an ulceration, but found nothing of a very characteristic nature. I met with two bacilli giving the histo-chemical reactions of the bacilli of leprosy, but considering how numerous the leprosy

bacilli usually are in any leprous tissue, I can attach no great importance to the result of microscopical examination.

This patient, born near Bergues, had never been a soldier, and had never left the north of France.

The third case was that of a shepherd, æt. 66, who came under my charge in July, 1885, in the Hospital St. Sauveur.

I found in this patient some lesions greatly recalling those of mixed leprosy: distortion and slight mutilation of the hands as in nerve leprosy, general tendency to ulceration, elephantiasic condition of the inferior limbs, ichthyosiform state of the skin, perforating ulcers in the plantar regions, bullous and pemphigoid ulcerations, anæsthesia with hyperæsthesia of the extremities, neuralgic pains in the limbs, on the forehead and at the root of the nose, with numerous cicatrices over the body in general. A careful histological examination of a fragment of a tubercle from the forehead did not reveal any bacillus very characteristic of leprosy; although in the vicinity of a sebaceous gland I found three bacilli, more or less resembling those of leprosy, and which were stained beautifully by the Ehrlich method. This man, born in Cogecques, near Fauquembergues, had never left the department of the Pas-de-Calais.

The fourth case I have to relate is that of a woman, æt. 58, who had been sent me by my late friend and colleague Dr. Hallez.

Here I came across some lesions almost exactly identical with those of nerve leprosy: distortion of the hands and feet, plantar hyperkeratinization, ichthyosiform condition of the skin, a tendency to elephantiasis of the legs, muscular atrophy, cutaneous hyperæsthesia, slight anæsthesia of the extremities, neuralgic pains in the limbs. I was able to make a post-mortem examination of the patient, and found some very marked alterations in the nerves of the limbs. The history of the woman proved that she had been born in France, and had always lived in the north.

Lastly, and as recently as in March, 1892, a patient came to me suffering from great muscular and cutaneous pains with many symptoms characteristic of nerve leprosy. This brought me back to the question of the persistency of traces of leprosy in France. The subject showed many alterations similar to those of nerve leprosy. Complete atrophy of the muscles of the shoulders, arms and forearms, atrophy of the muscles of the thenar and hypothenar eminences.

Absolute want of sensibility in the upper limbs, the upper half of the body, and over the neck and face, indeed to such an extent that the patient had often burnt himself without noticing it; loss of sensibility in the lips and tongue, numerous cicatrices over the body, with ulcerations on the fingers, plantar hyperkeratosis, and ulcerations in the nails. And, again, this man, born at Warhem, near Dunkerque, had never left his home.

Speaking of these different cases, I remarked in 1885 that all the patients suffered undoubtedly from lesions very similar to those of nerve leprosy. Were we, then, in presence of true and veritable leprosy? If so, it may be asked, where could the patients have contracted the disease? This last objection, however, would scarcely be of any weight were we to suppose the existence of an autochthonous leprosy, a degenerated form of the scourge which infested Europe, and France in particular, at the end of the fifteenth century. Indeed, if it is remembered that as late as the year 1229, at the death of Louis VIII., there existed over two thousand leprosy hospitals in France alone, and nineteen thousand in Europe, some last traces of that once rampant disease do not appear impossible. I was careful, however, to add that, to give a really scientific basis to this mere hypothesis, the cases I had seen and those to be studied afterwards would require to have their connection with leprosy proven in an undeniable manner and by rigorous clinico-anatomo-pathological and bacteriological investigations.

It must not be forgotten that while in these five cases we have found symptoms extremely like those of leprosy, on the other hand many particulars, which might have been expected, were conspicuous by their absence. We have never met with any paralysis of the orbiculars of the eyelids, nor with anæsthesia of the face, and bacteriological proof was still wanting.

Of course, it may be urged, this autochthonous leprosy would only be a very degenerated form of the old disease of centuries ago. Such was the theory I proposed in 1884, and such is evidently the opinion of Professor Lang of Innsbruck, who published a case similar to the third one I described in the *Wiener Med. Blätter*, and called it *Lepra Nostras*. The patient had never left Austria, and was a Tyrolese.

It was, then, with the greatest interest that I read the communication of my friend, Dr. Zambaco-Pacha to the Academy of Medicine in

August, 1892, and there saw that my hypothesis, as to the possible persistency of traces of the old leprosy in the north of France and in Paris, was not quite as bold as I had thought.

The possible existence of leprosy in Brittany, so clearly demonstrated by an authority on the subject of Dr. Zambaco-Pacha's standing, naturally strengthened my theory, even if it did not absolutely prove its truth. "But in a matter of this importance," wrote MM. Besnier and Vidal in December, 1892, relative to Dr. Zambaco-Pacha's report on Leprosy in Brittany, "we require actual and material proof in the shape of bacilli. We want the demonstration to be absolutely clear. Dr. Zambaco-Pacha has raised a point about an intensely interesting medical question: it is necessary that he should adduce scientific evidence in favour of his opinion. For the sake of the seductive theory he advances, he should be able to produce some bacilli of Hansen in, at least, one case of autochthonous leprosy. Let this be done in one single instance, and he will have materially assisted to further the complete demonstration, the absolute and conclusive evidence, such as we expect in our age of scientific positivism." (*Annales de Derm.*, December, 1892, p. 1279.)

It is, perhaps, hardly necessary to repeat how difficult it may often be to diagnose a true case of leprosy. But if the disease may in some instances pass unnoticed by the physician, it is of no less importance that it should not be confused with any other affection. This is specially applicable to nerve leprosy, which is a true and specific polyneurosis, and might easily be mistaken for many affections of a trophoneurotic origin. But on account of that very specification, nerve leprosy offers in its evolution, its dissemination, its localization on certain nerves, some characteristics of such a nature that the diagnosis will always be easy enough for any one who has seen the disease.

To sum up, then :—

1. There exist now in France, especially in the North and in Brittany, some affections very similar to leprosy.
2. It is possible that these affections are the last traces of the old and degenerated leprosy which overran France and Europe in the Middle Ages.
3. This theory is attractive and full of suggestion, but still awaits a scientific demonstration, resting on a basis of minutely observed and carefully described facts from an anatomo-pathological point of view.

CLINICAL NOTES.

BY W. ALLAN JAMIESON, M.D., F.R.C.P. (EDIN.)

**DYSIDROSIS OF THE FACE WITH UNILATERAL HYPERIDROSIS,
THE LESIONS BEARING A CLOSE EXTERNAL RESEMBLANCE
TO EPITHELIOMA ADENOIDES CYSTICUM.**

Mrs. S., æt. 45, came to the Royal Infirmary on the 4th June, 1892. She is a thin but fairly robust woman, has been married twenty-two years, and has had nine children, with an interval of two years and four months between the birth of each. She has lost one child from tubercular meningitis and two from measles. She perspires freely and easily on the right half of the body, only on rare occasions and when very warm or much excited, to a slight extent on the left. When seen at the Infirmary large beads of perspiration stood on the right side of the forehead and corresponding cheek, or trickled down the face; but the whole of the left side was absolutely dry. The axilla on the right side becomes often moist and stains her dress, but this never happens on the left. She thinks that the eruption from which she seeks advice existed more than two years and a half ago, but it was then limited to the malar portion of the cheek on the right side, and did not extend to the nose. The skin of the face is thin, pale and delicate, the follicular openings are not prominent, there are no comedones and no acne. The eruption consists of closely set, clear, shining vesicles, which are about the size of half a small shot, are seated superficially in the skin, some have a blackish-blue tint in their centre, appearing as if in their floor. They have no areola, but rise directly from the skin, are round, tense, transparent vesicles, and exhibit no white specks or milia in their walls. One only, the oldest, placed to the outer side of the eye, is the size of half a pea, and over it course some tortuous and dilated capillaries. After washing the skin with ether, two were punctured, and the fluid contents drawn up into a fresh vaccine tube. This was found to be neutral, and contained a few white cells like leucocytes, and some red blood-corpuscles. The distribution is limited to the nose on either side, to the cheek, forehead, and temple on the right side. There are

no subjective sensations. She says that the vesicles all but disappear in cold weather, become again more numerous as summer approaches ; none burst ; they dry up, scale off, and leave little marks or stains to show where they have been. As a result of the employment of a dusting powder of salicylic acid, starch and talc, the largest vesicle shrank and finally disappeared, and others grew smaller and less conspicuous. But with the advent of warmer days and less care in using this, the hyperidrosis reasserted itself, and the vesicles were soon as numerous as before. She has remarked that they are always more full and tense when she sweats much. She was last seen on December 30th, when the weather had been for a time frosty, and she had perspired little. There were then only a very few of the vesicles perceptible ; four, however, were distinct, and under each of these there could be felt in the subcutaneous tissue, over which the skin with the contained vesicle was freely movable, a hard pointed gristly nodule, apparently unconnected with the vesicle above. When the integument was stretched these four remained visible, but the majority, comprising the tiny residuum, wholly vanished. One of the vesicles was cut out, hardened in alcohol, and the sections, which were made in the laboratory of the Royal College of Physicians of Edinburgh, were stained with hæmatoxylin and eosine. The changes which had taken place were almost entirely confined to the epidermis. The papillary layer of the derma was flattened out, a very few leucocytes were discernible scattered throughout the fibres composing it ; but these were not aggregated round the vessels, and there were no evidences of inflammation. The sweat-ducts, so far as could be made out, were normal ; the excised portion did not reach to the coil. The columnar cells at the deepest part of the rete, and all the epithelial cells nearly as high as the granular layer were transformed into elongated granular strands, having a generally vertical direction, but in parts forming an irregular meshwork, with vertical meshes. Within these a few leucocytes were included, and a few could also be seen between the two or three rows of rete cells, which with the horny layer formed the roof of the vesicle. No connection between the sweat-ducts and the vesicle could be traced. The appearances therefore corresponded pretty closely to those described by Dr. Winkelried Williams,* as characteristic of cheiro-pompholyx, though

* *British Journal of Dermatology*, October, 1891.

there were even fainter traces of inflammation than he found, nothing more than the very scanty incursion of leucocytes. There were no cysts in the corium, but the orifices of the sweat-ducts in the epidermis were in some instances expanded into cyst-like spaces immediately beneath the horny layer. At the base of a hair-follicle, itself to all appearance healthy, and separated by a layer of connective tissue, were tube-like coils, exactly corresponding to those described by Brooke* as occurring in epithelioma adenoides cysticum. These were made up of parallel rows of darkly-stained palisade cells, between which lay epithelial cells of a fainter colour. The palisade cells were set edgewise on a fine basement membrane. Within the coils were masses of epithelial cells. At the same time there were no nodules continuous with the epidermis, and surrounded with connective tissue such as he represents. Unfortunately the piece of excised skin did not go deep enough to enable me to study the coils of palisade cells as fully as could be wished.

Dr. G. T. Jackson† has described and figured a case, which, except that it had invaded the whole face, and that he makes no mention of hyperidrosis, was quite parallel with mine. The patient was a cook, and the disease was worse in summer than in winter, and especially when she was much over the fire. An instance is recorded by M. Hallopeau,‡ to which my attention was drawn by Dr. J. J. Pringle, which corresponds in some respects still more closely. It was limited to the nose, and the hyperidrosis was so likewise. There were persistent vesicles, varying in size from a grain of millet-seed to a small pea, and either discrete or arranged in irregularly circular groups. There was some dilatation of the veins, but although the eruption was in full activity, there was no appreciable redness of the skin. The eruption was accompanied by painful sensations of tension and smarting, but not of itching. Concurrently with the vesicles minute drops of sweat could be seen to exude from the parts occupied by them, and nowhere else. She stated that the vesicles never ruptured spontaneously; they dried up, leaving behind a brownish macule, which disappeared in course of a few days. Hallopeau adds that notwithstanding the marked disturbance in the per-

* *British Journal of Dermatology*, September, 1892.

† *Journal of Cutaneous and Venereal Diseases*, January, 1886.

‡ *Annales de Dermatologie et de Syphiligraphie*, 1892, p. 728.

spiratory secretion, his patient was not affected with seborrhœic eczema, affording a fresh proof in support of the view which connects this form of eczema with a perversion in the functions of the sebaceous rather than of the sweat-glands. Probably, as Jackson suggests, the condition bears some relation to sudamina, though for some cause hitherto unexplained the duration is much more protracted. The interesting points in my case are that while the changes in the epidermis agreed with those described by Williams as characteristic of cheiro-pompholyx, those in the corium bore a manifest relation to the features found in epithelioma adenoides cysticum by Brooke. While, therefore, much must yet be done to arrive at a definite conclusion, my opinion coincides with that of Crocker, "that on clinical as well as anatomical grounds, cases such as mine must be regarded as intimately connected with the sweat apparatus, but should rather be associated with hyperidrosis than with dysidrosis."

UNILATERAL FLUSHING AND HYPERIDROSIS.

Mrs. B., æt. 50, came to the Royal Infirmary from a town some twenty miles from Edinburgh on August 3rd, 1892. She was a healthy woman, stout and well-nourished. She has suffered considerably at intervals during her life from what she terms "bilious headaches." In these the pain in the head came first, the sickness was a subsequent occurrence, but she is unable to remember if the pain was confined to, or was worse or more severe, on the right side of the face. It affected her forehead, occasioned sometimes flashes of light and some disturbance of vision, rarely giddiness. She has had eleven children. The periods were regular and profuse till six months since, but nothing has been seen till now, and menstruation has probably ceased. Rather more than a year ago patches of leucoderma appeared on the arms and body, not, however, below the waist and, if anything, were more pronounced on the arms. The patches are symmetrical, and the pigmentary accumulation at the margins of the blanched areas is well marked. For at least six months the right side of the face, and the right only, flushes when she is warm or is excited. This disappears when she cools, or is quiet and at rest. The day on which she was seen was a hot one, and she had been agitated in consequence of visiting her husband, then a patient in the

Infirmary. The flushing therefore was very vivid. The whole right side of the face, including the ear, and limited below by the ramus of the jaw, and not extending on to the neck, was of a deep crimson red. The redness, which on the forehead was lost among the hair, was accurately defined by a line running vertically down the centre of the bridge of the nose. The flushed surface was moist from large beads of perspiration; the left side was quite dry. She was directed to take five minims of ichthyol in capsules. In reply to a note she wrote me on the 17th January, 1893, that the flushing was less, though the hyperidrosis continued.

Flushing is an extremely common phenomenon at the menopause, and is apt to persist for a longer or shorter period after this change has been completed. Dr. H. Campbell* mentions one or two instances of this unilateral flushing, in one at least of which the patient used to suffer from neuralgia on the affected side. The chief point of interest in my case is the peculiarly exact limitation in the area, and the occurrence of symmetrical leucoderma, contrasting strongly with the asymmetry of the flush.

ADENOMA SEBACEUM.

THE following case, the first apparently recognized in Edinburgh (thanks to the excellent description and the accompanying chromolithograph, which we owe to Dr. Pringle),† is worth a short notice, as it differs in some particulars from those previously recorded.

Miss L. N., aged 15, a slight but healthy, bright and intelligent girl, was brought to me by her mother, a lady in good social position, on the 30th September, 1892. Menstruation had commenced a year before, but the eruption had been observed four or five years ago. It may even have existed at an earlier date, for a fringe which she had worn may have in a measure concealed it. Of late, however, it has extended, and this, as well as its disfiguring appearance, led to her being brought to me. It consists of yellowish or buff-coloured, flat, somewhat translucent papules, varying from a millet-seed to a pin's head in size. They rise perceptibly above the surface, and occur

* "Flushing and Morbid Blushing, their Pathology and Treatment," 1890, p. 50.

† *British Journal of Dermatology*, January, 1890.

both isolated and in clusters. The principal number of growths are on the right side of the forehead, close to the hair margin, and extending also in single instances some way into the scalp. There are some on the left side of the forehead, and a detached one in the centre of the right cheek. In the case of some a hair is found in the centre, in others not. There were no telangiectases or dilated capillaries. Their aspect corresponded in the closest manner when compared with the plate appended to Dr. Pringle's article. There had been no subjective sensations complained of till zinc ointment had been applied, since when the eruption had itched a little. A paste having the following composition was directed to be rubbed in twice daily till redness or decided soreness was produced. *Rx.* Resorcini, gr. 20 ; Zinci oxidi, gr. 40 ; Kaolini, gr. 2 ; Adipis benzoat, gr. 28 ; *Misce.* On October 7th it was reported that the paste had occasioned no irritation, so the quantity of resorcin was increased to double and the zinc diminished one-half. A week later the skin so treated was dry, smooth, tense, and stained here and there, especially where the nodules were present, a dull bluish tint, but there was no redness or pain. The treatment was continued for a few days longer, then nothing was done, but the epidermis allowed spontaneously to exfoliate. When seen on the 26th October, the skin of the forehead was smooth, perhaps a trifle dry, but no nodules were anywhere, even among the hair, discoverable. With exception of the slight aridity the integument was to all appearance normal. Up to the present time, three months after, she has continued well.

Brocq has laid down as one of the features of this complaint that the lesions are symmetrical.* This may hold for the majority of cases, but in mine, though some nodules occurred on the left side of the forehead, by far the larger number were situated on the right : the disease was bilateral but not symmetrical. Another point in which it differed from most at least of the few instances recorded was the entire absence of telangiectases, or indeed of any undue vascularity whatever on the parts attacked. In addition, the girl was intelligent and lively, and did not "present a condition of marked intellectual inferiority." Whether the cure will be permanent remains to be seen.

* "Traitement des Maladies de la Peau," 21^{me} edition, 1892, p. 61.

AN ERUPTION OF THE HANDS CLOSELY SIMULATING RINGWORM, DUE TO CONTACT WITH THE PRIMULA OBCONICA.

A MEDICAL friend asked me to look at his hands which had for a time been affected with an obstinate skin disease. On the ball of each thumb, on the backs and extending to the palmar surface of some of the fingers, were well-defined, dry, hard, red, scaly areas. The edge was distinctly raised and linear, the horny layer of the epidermis ragged and undermined. The general surface of the patches, which were of considerable extent, was rough to feel, thickened, and had a tendency to fissure. The whole condition strongly resembled that produced by the trichophyton tonsurans when it attacks the hands, but scales scraped off and examined showed no filaments or spores. It then came out that the ailment had appeared very shortly after he had grasped firmly between both palms some leaves of the primula obconica. The complaint proved rather intractable, but finally disappeared under the employment of soothing remedies.

FAVUS OCCURRING UNDER SOMEWHAT PECULIAR CIRCUMSTANCES AS TO ORIGIN.

On the 25th March, 1892, a lady brought her little boy, aged 5. He was rather pale, but not otherwise out of health. A year previously he had been pronounced to have ringworm, and for this an application consisting of a mixture of iodine and calomel had been prescribed. This had blistered the spots—had, his mother said, done them good, but they had not gone away. When seen there were three red spots rather larger than a pea, having on each a little yellowish crust. Several hairs removed were found to contain the achorion, and to present the appearances of hairs affected with favus. The tubes of mycelium ran lengthwise through the hair; there were no spores visible. No dog was kept; there was a cat, but it was said to be healthy, and, besides, it never came upstairs; certainly, I was assured, the boy never fondled it. He had been nowhere, so far as could be ascertained, where he was likely to have contracted the disease. He was treated by epilation, washing with superfatted potash soap, and the application of a resorcin paste of the strength of a drachm to the ounce. When last seen on the 24th May, the

hair was healthy, no mycelium or spores to be found, but the spots were still slightly scaly.

Favus is still by no means very uncommon in Edinburgh, some very aggravated cases are now and then brought to the Royal Infirmary. Two instances from different localities were brought on one day lately to the out-patient department. A few years ago a whole family, numbering five in all, their ages ranging from 19 to 5, were under treatment as out-patients. Their mother was an active and energetic woman, and carried out the treatment most conscientiously and thoroughly. To cure them all occupied a space of time varying in some of the members from six months to eighteen in others, but all eventually were cured, and after a period of six months had elapsed to test the completeness, they were exhibited to the Edinburgh Medico-Chirurgical Society, quite well. The procedure adopted was precisely the same as in the case related above. While the clinical appearances do somewhat vary in individual instances, the colour of the favi in particular being now a darker now a paler sulphur-yellow, the tendency to definite scarring being much greater in some persons than in others, and the ultimate destruction of hair being quite unimportant in some, most extensive in others, it seems impossible from these characters alone to deduce the conclusion that there is more than one variety of the achorion.

PECULIAR ULCERATIVE ERUPTION OF THE FACE, ASSOCIATED WITH THE FORMATION OF HORNY PLUGS, ACCOMPANIED WITH PAIN AND APPARENTLY DEVELOPING IN THE SEBACEOUS GLANDS.

For the opportunity of seeing and studying this case, which is quite unique so far as my experience and reading go, I am indebted to my friend Mr. Malcolm Morris.

Miss B., aged about 60, a stout, hale and active lady, was first seen by me on July 1, 1892. She told me that in 1856 when on the Continent she was exposed for a considerable time to a severe snowstorm, her face assumed at the time a purplish hue, and since then it has been extremely sensitive to cold. The same thing was reinduced in the inclement winter of 1861-62. Ever since she has been subject at times to the appearance of painful spots on the face, chiefly on the cheeks and nose, which have left scars, thin and superficial, though

distinct, and without pigmentation. There form in these spots little hard plugs, which she must pull out with forceps, using a large magnifying glass, to get rid of the pain which they occasion if left unremoved. They are, she said, conical or thread-like, hard, horny bodies. When seen there was an ulcer with a red, glistening, rather cedematous or watery, granulating floor, in which were to be seen little pearly bodies, like minute sago grains. The ulcer was the size of a shilling and had a well-defined margin. There were also two or three others rather smaller on the right cheek. The condition was certainly not of a tubercular or lupoid nature, it bore a slight resemblance to Mr. Hutchinson's summer eruption, but there was no vesication nor any affection of the ears. She kindly gave me some of the plugs which she had extracted. They were of the thickness of a fine pin, rather longer than broad. When examined under the microscope they were found to consist of conical horny plugs of epithelium, some contained cell nests, some seemed made up of prickly cells, some were branched. They had the appearance of having come from the sebaceous glands, and were like horny comedones. Probably the pain she complained of was due to the pressure of these "corns" on the nerves, rendered sensitive by the ulceration. But then how to account for the ulcers? She told me that the ulcers gradually and spontaneously healed, but only after the lapse of many months. There can be no doubt that their cicatrization was delayed by her manipulations to pull out the plugs. Endeavour was made by employing the strongest salicylic and creasote plaster muslin, to alter the soil, and thus eradicate the tendency to perverted activity on the part of the sebaceous glands, but the result was but partially successful, and though a month later one of the ulcers had healed under this treatment followed by dusting with aristol, the others were *in statu quo*.

REVIEW.

DISEASES OF THE SKIN.*

DR. CROCKER'S work has won for itself so favourable a place among the larger text-books of skin diseases, that the appearance of a second edition has been for some time expected. The task of preparing this edition has been, as the author observes in his preface, an arduous one, on account of the enormous amount of new material which has had to be dealt with. For in a book of this class, which is sufficiently advanced and modern to serve not merely as a text-book for the student and practitioner, but also as a work of reference to the expert, it is only constant revision by the author, and almost daily additions which will, with the present rate of progress of dermatological knowledge, keep it abreast of the requirements which it is intended to meet. The alterations and additions are evident everywhere—indeed, almost every page shows signs of emendation.

At least twelve new articles and many new paragraphs have been added on diseases which have either been described since the writing of the first edition, or which have since then been crystallized from more or less vague conceptions into clearly drawn morbid entities. For example, the Erythema induratum, or *erythème induré des scrofuleux* of Bazin, the discussion of which has been revived of late both here and in France; the Hydroa vacciniforme of Bazin, so long unrecognizable and now identified with the severer form of Hutchinson's summer eruption; Pityriasis rubra pilaris, now definitely acknowledged by Kaposi as identical with his Lichen ruber acuminatus; Morvan's disease, a multiple panaris accompanying syringomyelia; Darier's disease, and the question of psorospormosis; Angioma serpiginosum, the nævus-lupus of Hutchinson; Angiokeratoma, teleangiectic warts; Phagedœna tropica, the phagedœnic ulcers of various tropical countries; Seborrhœic dermatitis, the various forms of the so-called seborrhœa; Adenoma sebaceum (so-called), teleangiectic

* *Diseases of the Skin.* By H. Radcliffe Crocker, M.D., F.R.C.P. 2nd Edition, 1898. (London: H. K. Lewis.)

tumours found mostly on the faces of young people of weak mind ; Epidemic exfoliative dermatitis (epidemic eczema of workhouses and hospitals) ; Erythema ab igne, ringed erythema of the shins ; Parakeratosis variegata, a lichen-planus-like eruption described by Unna and Pollitzer ; Acanthosis nigricans, deep pigmentation accompanied with papillomatous outgrowths and excessive cornification, described by Pollitzer ; the multiple, benign, tumour-like, new growths described by Buzzi and as yet unnamed ; follicular disease of the scalp, an ulcerating and fungating disease of the sebaceous glands first described by Cock ; congenital fibro-sebaceous disease, an intra-uterine disease and atrophy noticed by the author ; Folliculitis decalvans of the hairy parts, and several additional drug eruptions and diseases of the nails.

It requires a firm hand and a clear judgment to select from the profuse and ever-increasing crop of dermatological literature that which is most likely to prove of ultimate value and to assign to it its proper heading and its relative importance. And although we do not always agree with Dr. Crocker in his estimation and treatment of this new material,—for there must necessarily be differences of opinion as to how this should be done in individual cases,—there can be no doubt as to the success with which it has been managed as a whole. Very little of importance has been overlooked, and almost every page contains references to the literature of the subject on hand. The limits of space, which in a text-book are necessarily somewhat narrow, have often compelled these references to be made with brevity, but we were struck by the care with which we found that the essential points of the articles with which we were familiar had been extracted and worked into the text.

The classification adopted is that of Hebra, with some modifications. The choice was made avowedly for reasons of convenience, for at the present day it could be defended on no other grounds. It is still difficult to find any basis of classification which does not separate affections which ought to be found in close juxtaposition, and, on the other hand, bring incongruous companions into the same classes. But, granting this difficulty, it would not have been a hard task to have found a scheme of arranging the various dermatoses, new growths and other anomalies of the skin and its appendages which would have sinned less in this respect than the one which has been chosen. As the index is, after all, the actual guide to which the

reader turns, the matter is not so important as regards the reference to individual affections, but the weakness is apparent when looked at in connection with its influence on the study of the relationships of the different groups of affections and the attainment of a correct synthetic grouping, which it is most important to impress on the student if he is to acquire a broad conception of his subject. We may take as an instance the subject of erythema. Some of the erythemata are arranged in one class and some in another; the former are regarded, as it appears to us arbitrarily and incorrectly, as being purely "congestions," whilst the second half are massed together into a pot of "inflammations," the contents of which are of such varied character, that it ceases to be of any service as a means of classification. On the other hand, it has split up the erythematous group and prevented any exposition of the general pathology of the angeioneuroses, which is the real common basis of the whole family. Had this, instead of Hebra's division, been taken as the bond of connection, we might have had a group which accentuated the relationships of the various erythemata, and the connection between the multiform erythemata, urticaria, pemphigus, hydroa herpetiformis, and some forms of purpura, which would have been more valuable than the careful accentuation of their points of difference.

Another example of the loss of a valuable synthetic group through the adaptation of an artificial method of arrangement is found in the treatment of the tuberculous diseases of the skin. The various manifestations of syphilis and of leprosy are rightly kept together in separate chapters, but the lesions, which are due to the action of the bacillus tuberculosis, are scattered about under separate headings and in different parts of the book. The article on Lupus erythematosus, which the author does not pretend to regard as a tuberculous affection, is packed in between those on Lupus vulgaris and Scrofuloderma, whilst Verruca necrogenica and Tuberculosis verrucosa cutis are dealt with under the heading of Dissection Wounds. The term Tuberculosis of the Skin, which ought by right to have headed the description of all the tuberculous affections of the skin, is confined to the designation of an extremely rare affection, the acute tuberculous ulcer, and a false view is thus suggested of the ætiology of the other manifestations. Why Dr. Crocker should object to the application of this term in its wider meaning, as he distinctly does, we confess our inability to understand. He has grouped together the "Diseases

due to *Pus Cocci*," why not the Diseases due to the Tubercle bacillus? It is an ætiological classification which the dermatologist should aim to secure when possible, as being not only the truest to nature, but as the one which above all others is of most value from a practical point of view. Hebra's classification, however modified, is out of unison with our modern conceptions, and has certainly done much more to impede than to help those who are still governed by its traditions.

Of the individual articles there are so many that are excellent, that it is difficult to select any for special mention. One of the most important and at the same time the most difficult—that which treats of Eczema—is treated with great clearness and breadth of view. It has benefited in many respects by its revision. The multiplicity of the exciting and predisposing causes is more clearly recognized, and whilst Unna's revolutionary theory of the universal parasitic origin of all eczematous processes is rejected as unproved and opposed to clinical facts, the existence of eczemas of purely parasitic origin, and the effects of the secondary contamination of pre-existing eczema by parasites, is dealt with in quite a different manner to that in the article in the former issue. Lichen planus is at length dissociated from the Lichen ruber of Hebra, and accorded its true position as a disease *sui generis*. A disease of which we see a good deal has thus ceased to be treated as a subvariety of a disease which we practically never saw at all.

Other excellent articles are those on Sphaceloderma, Scleroderma, Syphilis, Leprosy, and a much-needed one on the vexed subject of Seborrhœa. The diseases of the hair are spoken of at length, both as regards structural changes, atrophies, dystrophies and parasitic affections. Alopecia areata is divided into neurotic and parasitic forms, but we do not think that Dr. Crocker will find so many opponents as he seems to think to this division, even when he upholds the great superiority in numbers of the latter over the former cases.

The chapters on the various Parasites, vegetable and animal, are very complete, though no reason is given, except the adhesion to an old classification, as to why hyphomycetes are regarded as parasites and schizomycetes not. This arbitrary limitation will certainly tend to prolong the confusion which at present exists among students as to the rôle played by "parasites" in the causation of skin lesions, a confusion which is apparently due in the first place to the very inade-

quate and misleading articles on dermatology which they find in their usual text-books of general medicine.

An appendix has been added containing a classified analysis of a large number of hospital and private cases, the bald statistics of which are elucidated and freed from suspicion by a few pages of very interesting explanatory remarks as to the cause of variation in the different percentages found in the relative frequency of certain skin diseases in hospital, general and consulting practice respectively.

One most valuable feature of the work is the care and accuracy with which the subject of therapeutics is handled. The author has not, as is so often the case, contented himself with giving a condensed statement of what might be done, but gives definitely the results which have been achieved by himself and others through the employment of certain forms of treatment. Nor does he hesitate to record the failures as well as the successes, and to point out the synchronous conditions of health or circumstance which make for or against the adoption of various procedures. Without being in the least either optimistic or pessimistic, Dr. Crocker maintains an unbiassed attitude of criticism which inspires confidence in his judgment and recommendation, and the instructions which he gives both in the text and in the therapeutical appendix are full of detail, and eminently practical.

We have had to point out what we consider to be some defects in Dr. Crocker's book, but they certainly do not weigh much in the scale against its merits. It is replete with information which has not been merely compiled, but absorbed and assimilated with the author's own experience before being incorporated into the text. The direction in which he especially excels is the clinical description of disease, and the clear and precise style which he adopts, which is obviously the outcome of a thorough acquaintance with his subject, considerably facilitates the task of acquiring a complete and correct conception of the affection under consideration. Had these advantages been combined with a modern account of the histology and physiology of the skin in illustration of its anatomical and functional changes in disease, we should consider the value of the book to have been enormously increased, but even in its present form we have no hesitation in recommending it as the most complete and satisfactory treatise on skin diseases in the English language.

CURRENT LITERATURE.

ON THE SIGNIFICANCE OF PLASMA CELLS FOR THE HEALING OF ULCERS OF THE SKIN, IN GRANULOMATA AND OTHER SKIN DISEASES. P. G. UNNA, of Hamburg. (*Berliner klin. Wochenschr.*, 1892, No. 4. 49.)

THE paper commences with a review of Grawitz's work on his so-called "sleeping cells." For several years the author has been working at the same question as Grawitz, namely, Whence come the cell masses in pathological changes of the skin? The ordinary methods of preparation (Müller's solution, chromic acid, Flemming's solution, &c.) he found useless. A method described by him consists in staining the alcoholic preparation with old methylene violet and methylene red, and decolourizing with his special glycerine and æther mixture. By this method not only the plasma cells and the "mast-cells" are beautifully multi-stained, but the nuclear threads and the bacteria in the necrotic parts are also stained. The sections are over-stained in methylene blue (quarter of an hour to a whole night), washed in water, and then put direct into the glycerine and æther mixture, and about a quarter of a minute in this is generally sufficient. The section is then again carefully washed in water, passed through absolute alcohol, cleared in bergamot oil and mounted in balsam. The author also describes a simple double stain as follows:—The preparation is hardened in alcohol, and then over-stained in alkaline methylene blue (four to six hours), and placed in an alcoholic, neutral and very dilute (about one per cent.) orcein solution for a night. In the morning a rapid washing in absolute alcohol, put into bergamot oil and mounted in balsam. By this process the plasma cells are stained a beautiful blue, the "mast-cells" cherry red, the ground substance orcein red. With regard to the plasma cells, Unna states that these but rarely reveal the threads seen in the nuclei of other cells, but that in the larger ones there is usually a number of very homogeneous oval faceted nuclei.

The author's first investigations were with carcinoma, the characteristic structure of which he found to consist entirely of plasma cells, which did not show any further degenerative changes. The plasma cells of carcinoma are not particularly large, but of the same size. The smaller groups consist of larger cells, and the larger of smaller cells, and these are found especially in the centre of the epithelial new tissue formation.

In rodent ulcer the infiltration zone was observed to be very large. In Paget's carcinoma of the nipple quite an abundant plasma formation was found. Owing to the rich development of plasma cells some carcinoma might be described as standing much nearer to the infective tumours (tubercle, syphilis) than to the majority of the sarcomata. The great significance of the difference of the plasmons in tubercle (lupus) on the one hand, and syphilis on the other hand, are then discussed.

Passing next to the sarcomas of the skin, these, like other sarcomas, fell into two groups, namely, spindle-celled and round-celled, and this difference was found to be not only due to the shape of the cells themselves, but also to other points. In the spindle-celled group very little fibrillar network was found, whereas in the round-celled group a large quantity of network existed. In the first, or spindle-celled, plasma cells are found only in isolated cases; and then only sparingly. The round-celled sarcoma contain them regularly. In round-celled tumours the plasma cells are only the mother cells, and give to these cells their form. They never become spindle-shaped. The immediate neighbourhood of a sarcoma node appears very similar to that of a lupus deposit, but in the nodule itself this likeness disappears. The name round-celled sarcoma is chiefly of importance in contradistinction to the spindle-celled one. The round-celled contained, however, no very well-defined species of cell; approximating this is the cubic-celled sarcoma, which, after treatment with the protoplasm stain, is very well defined. It is an atrophic plasma cell, which takes a specific stained number of granules, and reveals itself through the number of small cell bodies, all of the same size, with their slightly stained nuclei.

Some observations are then made upon mycosis fungoides, which has been considered by one author (Funk) as sarcoma; by another (Auspitz) as belonging to the infectious granulomata; and by another (Ranvier) as a lymphoma. Unna does not, however, by his stain find that this process at all resembles lymphomata or sarcomata, but that it has quite a peculiar history, which even separates it from syphilides and the tubercular plasma cell, as also from the cubic-celled sarcoma. Its clinical characters approach those of the infectious granulomata.

Some observations were also made on serpiginous ulcers, in which the extending edge of the plasma closely resembled that of a soft ulcer, the periphery of the plasma, with its necrotic boundary and necrotic radiating processes. To make the analogy still more perfect, there was also found the chained-bacilli, which, in the soft ulcer, are very similar, and in fact probably identical with those of the serpiginous.

Acne and trichophyton were also investigated, and processes which are generally looked upon as simply inflammatory. The acne skin consists of an appearance of simple progressive disturbances, which centre themselves round the follicle. A further peculiarity lies in the remarkably symmetrical mixture of various hypertrophic elements. These are the following: (1) plasma cells; (2) very large hypertrophic spindle-cells; (3) very large spindle-cells with granules of plasma cells collected in the centre; (4) many nuclei; and lastly (5), true giant cells with a hood-shaped nuclear zone and small quantities of cloudy protoplasm.

In kerion of the scalp the same condition is found as in trichophyton.

The knowledge of the plasma cells helps one in the investigation of tubercular and syphilitic tissues. The rôle which these play as mother cells for the degenerated areas of these infectious tumours, forms a connecting link with the infectious tumours themselves. Virchow was the first who gave the name of granuloma from their analogy to the granulation tissue. Unna believes the plasma cell to be purely a pathological formation, without embryological analogy. Some irritant is necessary, acting on the developing tissue. Generally speaking, it is a sign of a powerful, chronic, progressive, nutritional disturbance. Slighter irritation, as, for instance, in the infectious catarrhs, as eczema, there is but a slight formation of plasma cells. These are only found in cases of long-standing chronic eczema with

very abundant cell-infiltration in single small groups. Most of the elements of cell-infiltration in eczema remain simple spindle connective tissue cells.

The only other infective process in which Unna has definitely established plasma cells is in the first stage of variola.

W. KNOWSLEY SIBLEY.

AFFECTIONS OF THE HAIRY REGIONS (FACE AND SCALP) ENDING IN ATROPHY. Drs. DUCREY and RODOLFO STANZIALE. (*Giornale Italiano delle Malattie Veneree e della Pelle*, Fascicolo II, June 1892.)

THE authors preface their researches with a review of similar affections previously described :—

1. Folliculitis destructiva of the hairy regions (Quinquaud).
2. Folliculitis et Perifolliculitis decalvans of Brocq, who describes three varieties: *a.* pseudo-area; *b.* folliculitis destructiva (similar to that described by Quinquaud); *c.* lupoid sycosis.
3. Alopecia cicatricialis innominata of the hairy scalp, and acne depilans cicatricialis of the beard, described by Bernier.
4. Acne decalvans of Lailier.
5. Ulerythema sycosiforme of Unna, or dermatitis perifollicularis parenchymatosa atrophicans of Sack.

They then give their clinical and pathological observations based on seven cases, and these may be thus summarized :—

1. There are two groups of these affections. The first is characterized by inflammation of the hairy regions of the face, chronic in its course, and extending in time into the temporal regions of the hairy scalp. Ultimately the hair-follicles and papillæ of the skin atrophy.
2. The second group is characterized by rapid alopecia of the hairy scalp, accompanied by a peculiar atrophy of the skin. There is scarcely any sign of inflammation present.
3. The affections of the first group are by no means rare, and run a well-marked course.
4. In the first group, the infiltration of the skin with which the disease begins is frequently accompanied by vesicles or pustules limited to the hair-follicles.
5. The first group may be termed dermatitis sycosiformis atrophicans.
6. The character of the atrophy and the rapid loss of hair support a tropho-neurotic origin for the second group, which may be termed pseudo-area.
7. Generally speaking, both groups are rebellious to treatment: ichthyl was apparently useful in the first group.

As regards the ætiology of dermatitis sycosiformis atrophicans no specific micro-organism could be demonstrated, contrary to Quinquaud's observation; but staphylococci were present in abundance.

The *diagnosis* between pseudo-area and area celsi is important. In pseudo-area, the atrophied region is depressed, and little pits may be detected scattered over the affected surface. In area the patches are round, never sinuous, like pseudo-area, which often leaves isolated tufts of hair unaffected; lastly, in area celsi the hair, after a variable time, grows again; in pseudo-area this never occurs.

Sycosis vulgaris is distinguished from dermatitis sycosiformis atrophicans, in being confined to the hair-follicles. Sycosis vulgaris does not affect the inter-follicular skin; hence the scars are punctate. In dermatitis sycosiformis atrophicans there is not only complete atrophy of the pilo-sebaceous system, but

also of the papillary layer of the derma. Lastly, the pustules in sycosis are deeper and larger than the superficial purulent points in dermatitis sycosiformis atrophicans. Dermatitis sycosiformis atrophicans most frequently attacks the developing beard, pseudo-area the scalp of the adult.

Both affections have only been seen in males; they are not hereditary, and no social predisposing factor is forthcoming. The authors believe that a "contagium vivum" is the cause of dermatitis sycosiformis atrophicans; but have not been able, in spite of their elaborate researches, to determine its nature.

Histologically, the difference between the two groups was one of degree in the intensity of the inflammatory process. In the early stages, the derma showed round-celled infiltration in the vicinity of the hair-follicles, sebaceous and sudoriparous glands, especially well marked in dermatitis sycosiformis atrophicans. The round cells had in places made their way into the rete mucosum. In the final stages of the process the corium showed well-marked sclerosis; there was no trace of hair-follicles or of glands; the pars papillaris no longer existed; the epidermal layers were present, but the interpapillary processes absent. Giant cells were not observed in any of the sections, contrary to Sack's statements, and "mastzellen," as Quinquaud observed in his cases, were not recognized by the authors.

As regards terminology, folliculitis destructiva of Quinquaud is identified by Lailier to be the same affection as his acne decalvans. Besnier recognizes his acne depilans cicatricialis to be equivalent to Lailier's acne decalvans and Unna's ulerythema sycosiforme.

The authors consider that in dividing these affections into two groups and naming them as above, less confusion is likely to arise, as the terms themselves indicate their clinical and pathological features.

FRANK H. BARENDT.

ACUTE CUTANEOUS GANGRENE—GANGRENE HYSTÉRIQUE—ZONA GANGRÉNIQUE. Dr. JOSEPH. (*La presse médicale Belge*, March 12th, 1893.)

THE author relates an interesting case of the above in a man aged 27, who had some years previously had his left hand burnt with sulphuric acid, which was followed by the formation of a kind of false keloid.

During the night of January 30th last, the patient was awakened suddenly by a sensation of coldness of the right arm, which he could not get warm, and he noticed on the right hand a white anæsthetic spot, surrounded by a red ring. Some days afterwards this spot turned yellowish-green in colour, the superficial layers of the skin came off and were replaced by a cicatrix resembling a false keloid.

The patient was otherwise quite healthy and did not appear to be of a nervous temperament.

Dr. Joseph does not consider the case one of hysterical simulation,—of which he mentions an interesting case,—as the patient was thrown out of employment in consequence and was exceedingly anxious to recover quickly; he was, moreover, examined by specialists, who could find no evidence of syringomyelia. This is the first case which has been observed of the so-called hysterical gangrene occurring in a male.

H. W. MARETT TIMS.

DERMATITIS HERPETIFORMIS OF DUHRING, WITH SCALY ERUPTION ON THE FACE. W. DUBREUILH, M.D. (*Archives cliniques de Bordeaux*, February, 1898.)

IN relation to a recent discussion at the Société de Dermatologie on the connections which may exist between the herpetiform dermatitis of Duhring and foliaceous pemphigus, the author relates a case which is interesting, as it shows two types of eruption appearing simultaneously, lasting for a considerable time and each retaining its own particular distribution, and from this, as well as from other cases observed by M. Brocq, he concludes that a squamous eruption analogous with that of foliaceous pemphigus may form part of the complexus of herpetiform dermatitis. Is it foliaceous pemphigus?

CASE.—Mme. B., æt. 40, presented a general urticarial eruption which had lasted for eight months. On the face was a squamous eruption of two months' duration. The body generally showed signs of marked irritation, which was very intense at night. The legs were œdematous and showed no really healthy skin.

The face was bright red, swollen with yellow greasy, scale-like crusts resembling seborrhœic eczema, with little or no irritation.

The general health was good with the exception of insomnia caused by the irritation: no digestive disturbance was present to account for the urticaria.

Ichthyol and zinc ointment were applied to the face, and menthol oil to the body, which greatly relieved the irritation.

The eruption on the face still extended forwards but retained its characters, but that on the body became vesicular; the vesicles were irregular, surrounded by a red zone, grouped in the position of the former lesions, and appeared in crops.

A few days later, the eruption on the body appeared with more violence than ever; there were groups of bullæ covering the whole body, with some pustules. Belladonna, quinine and ergotine were administered during the day, and chloral and bromide at night. Menthol no longer relieved the irritation. The patient became weak and nervous and lost her appetite from the constant irritation. In spite of all treatment the condition still persisted.

H. W. MARETT TIMS.

THE RELATIONSHIP BETWEEN THE ALOPECIA OF KERATOSIS PILARIS AND ALOPECIAS TERMED SEBORRHœIC. L. BROCC, M.D. (*Annales de Dermatologie et de Syphiligraphie*, July, 1892.)

CASE.—A boy æt. 8 years, with slight ichthyosis, commencing keratosis pilaris and patches of alopecia, and a family history of phthisis. When six months old he had eczema; the present condition first appeared when between twelve and eighteen months old.

On the top and back part of the head were a few white hairs, and if the skin be not kept clean it gets covered with a thick dry adherent desquamation; it is slightly reddened and there is no irritation. Around these patches are a few atrophied hairs, which can be easily pulled out, some perfectly normal hairs being also present. In the same situation are small red papules, most of which have a minute crust in the centre, with a tendency to be grouped in circles. These papules somewhat resemble acne or circinate seborrhœic eczema.

At the sides of the head there is a fine dry desquamation with a slight redness

of the skin; the hair-follicles are healthy, but at certain points there is an appearance of seborrhœic eczema.

The skin of the trunk is very dry and covered with very fine scales resembling pityriasis, and showing evidence of irritation. On the posterior and lateral surfaces of the arm is well-marked keratosis pilaris.

The palms of the hands are dry and horny, and the nails readily drop off. The lower limbs show characteristic keratosis pilaris with a slight degree of ichthyosis.

After referring to the treatment, M. Brocq goes on to make some excellent remarks on this affection; he thinks the age of the patient, the redness of the skin, the absence of any irritation and moisture are against a purely seborrhœic origin, and believes that keratosis pilaris is intimately connected with alopecia, occurring at any age, and may be the cause of its great resistance to treatment.

H. W. MARETT TIMS.

HYDROSADÉNITES SUPPURATIVES DISSEMINÉES. WILLIAM DUBREUILH, M.D. (*Archives de Médecine expérimentale et d'Anatomie pathologique*. January 1st, 1898.)

In this admirable paper the author commences by giving a general description of the disease, with full references to the literature of the subject. He relates two cases, one hitherto unpublished, and the other previously abstracted in this Journal (January 1898). After giving an account of the pathological anatomy, he goes on to say that the eruption is made up of lesions usually isolated or disseminated; even when they are very numerous in one position they seldom run together. Each commences as a small, hard, well-defined nodule situated in the deeper layers of the skin, the epidermis being unaltered and scarcely raised; it gradually increases in size and becomes adherent to the skin, which becoming raised gives rise to a red and inflamed papule, some, however, being copper-coloured, resembling a syphilide. When fully developed a vesicle forms, which goes on to suppuration, a small crust occupying the opening of the sweat-duct. Exudation in the epidermis occurs, which raises up the crust together with the horny layers. When suppuration commences a white top to the papule gives, when pricked, a drop of pus, and a central core may even be present. The seats of election are the face, scalp, front and sides of the neck, the ears, and the inferior maxillary region, the loins and extensor sides of the limbs. The lesions are common about the buttocks and knees, and especially round the ankles, while their presence on the palms and soles, although not invariable, is frequent and of great nosological importance.

The genital region appears never to be attacked while the popliteal spaces, the bends of the elbows, the abdomen and upper part of the back are seldom so.

If the lesion be large a small abscess may open on to the surface. With regard to the diagnosis, the diseases with which this is most likely to be confounded are acne varioliformis, acne pilaris, and "acné nécrosante"; but the situation, seat of commencement, character of the crust, and relation to the hair are distinguishing characters; the latter also distinguishes it from the various forms of Folliculitis, whilst the irritation, the frequently sudden appearance in warm, and disappearance in cold weather, and the erythematous patches serve to distinguish Hutchinson's summer prurigo from this affection, though some of the cases published show certain analogies. The case of Folliculitis exulcerans published by Lukasiewicz,

and considered by Pollitzer as identical in nature, is in many points very similar, but in it the eruption was in definite limited groups, and went on to ulceration rather than suppuration, accompanied by periostitis and pains in the bones and joints; moreover, there are differences in the pathological anatomy. A good heliotype illustrating the condition is appended.

H. W. MARETT TIMS.

A POSSIBLE CASE OF ANÆSTHETIC LEPROSY. JAMES MCF. WINFIELD, M.D. (*Brooklyn Medical Journal*, March 1898.)

THE patient, æt. 16, undeveloped physically and sexually, with the appearance of a mulatto, and without any family history of syphilis, tuberculosis, or leprosy (with the exception of a history of possible contagious exposure from a playmate, who had some suspicious illness and was the native of a leprous district), presented the following history and symptoms:—

Three years ago small circular patches were noticed over the right malar eminence and on the buttocks, followed by lightning pains in the limbs, especially on the right side. These patches were at first treated as ringworm, which they resembled, but they continued to enlarge, fresh patches appeared, the patient became listless and stupid, and his health generally began to decline.

Present Condition.—On the left side of the face, extending from the lower jaw to the ear, is a pale non-pigmented patch, with a pigmented line running across its centre; the margin is raised. Similar spots are present on the neck, shoulders, trunk and limbs, formed either by extension or by the coalescence of small maculæ. There is no ulceration, but there are a few small vesicles and scales about the margins. Injuries to the skin resist treatment, and very slight injuries give rise to deep ulceration, which also appears to resist all treatment.

There is progressive atrophy of the interossei muscles, with flattening of the thenar and hypothenar eminences. Both ulnar nerves feel cord-like and are nodulated. The points of resemblance to, and differentiation from, syringomyelia are set forth in tabular form.

THE ELEVENTH INTERNATIONAL MEDICAL CONGRESS.

THIS Congress will be held in Rome from September 24th to October 1st.

The following are the subjects proposed for discussion in Section XVII. (Dermatology and Syphilis): 1. The gonococcus and the blenorrhagic process; 2. Interpretation and pathology of the so-called primary idiopathic sarcoma of the skin, and nomenclature of the disease; 3. Nature of the venereal ulcer; 4. Actual state of the question of the lichens; 5. Eczema and its nature; 6. When should the general treatment of syphilis be commenced? The discussion on Lichen will be opened by Mr. Malcolm Morris.

LITERARY INTELLIGENCE.

A JOURNAL entitled *Zeitschrift für Dermatologie, Syphilis, und Urologie* will shortly appear in Vienna, under the editorship of Professor Eduard Lang, with a distinguished staff of collaborators. It will be published at irregular intervals by Josef Safár (viii Schlösselgasse 24).

THERAPEUTIC NOTES.

THE TREATMENT OF RINGWORM OF THE SCALP. ALFRED EDDOWES,
M.D. (*Brit. Med. Journ.*, April 15th, 1898.)

DR. ALFRED EDDOWES, who opened a discussion on this subject at the July, 1892, meeting of the B. M. Association, stated that the following method of treatment in out-patient practice could be "highly recommended," but, apparently, gave no statistical evidence in favour of his contention.

The essential preparations are (1) a sulphur and vaseline ointment about 3j to ʒj, (2) olive oil, (3) a compound chrysarobin ointment containing, say, 25 grs. of chrysarobin to the ʒj, the same proportion of ichthyol, and 10 grs. of salicylic acid. The plan is this :

First Week. The sulphur ointment to be applied daily. Hair to be cut as short as possible with scissors over the whole scalp. Scalp to be washed two or three times during this week with soft soap or soda and water. A cap to be worn night and day.

Second Week. The chrysarobin ointment to be rubbed well into a few patches, but not over too wide an area, or in such quantity as to run down on the face, neck, or ears; the rest of the scalp to be dressed with the sulphur ointment. If the two ointments become mixed up a little it is of no consequence. A piece of oiled silk or gutta-percha tissue a little larger than the hairy scalp is then placed over the ointment, and a closely-fitting skull-cap is then fastened over all. All ointment to be thoroughly wiped off scalp and tissue or oiled silk, and fresh ointment to be applied daily. The area to which chrysarobin ointment is to be applied must be regulated according to the condition of the skin and the comfort of the patient from day to day. If the skin be very intolerant of the remedy, it should be cleansed by wiping with tow or cotton wool, and be dressed with the sulphur ointment instead. If the chrysarobin be well borne, the area to which it is applied is daily extended till the whole scalp is dressed with it, but never for more than four days consecutively. At the end of four days in any case, and sooner if necessary, on account of irritation, the sulphur is entirely substituted for the "dark" (chrysarobin) ointment. During the last night of the week the scalp is well oiled, next morning well washed with soap or soda and water, dried, oiled, and patient brought for inspection.

Third and following weeks. Precisely as the second, until a cure has been effected.

The most important practical points are (1) thorough cleansing of the scalp before the employment of chrysarobin; (2) the removal of secretion and scales by means of the sulphur ointment and oil before redressing with chrysarobin. As Unna has stated, the skin should be brought back to its normal colour before the chrysarobin is reapplied. This was a point of the highest importance. If any

chrysarobin find its way on to the forehead, neck, or ears, the parts should be dressed with vaseline, zinc ointment, dusting powder, or, still better, with zinc gelatine and cotton-wool. The cap should fit closely and come well over the scalp, but not constrict any part. A cap made by the "Scottish Home Industries" answered very well. It was better than bandages or handkerchiefs, and it had the great advantage of not advertising to the public that the head inside it was undergoing surgical treatment.

Among children of the poorer classes ringworm was scattered broadcast in the schools, and Dr. Eddowes suggested that the parents or guardians should be requested to keep the hair of the children's heads cut rather short; that they should wash the scalps once a week with soft soap and warm water, and oil them afterwards or apply vaseline; and that a little oil should be used regularly for the hair. At the end of a term, especially in summer, the heads should be at once systematically examined, and the guardians of each child should be informed of the existence of any disease requiring treatment, and be requested to have it attended to during the vacation; and that on reassembling of the school their child would not be allowed to attend unless cured or so dressed as not to be a source of contagion to the other children. When under efficient treatment for ringworm of scalp, there was no sufficient reason why children should not go to school. Their hair could be cut short with a clipping-machine or a metal comb and scissors, and the scalp dressed with a mild ointment such as sulphur or boric acid, and washed once, twice, or three times a week with an antiseptic soap or common soft soap—or, if preferred, a solution of soda—according to the state of the skin. If the skin were sensitive, once a week would be sufficiently often for the employment of soap. Afterwards at any convenient time—after an examination or at the end of a term—the chrysarobin method or any other in which the medical attendant felt most confidence might be commenced. Such a preliminary procedure was sufficient to cure some cases, and always decreased the diseased area. Dr. Eddowes emphasized the superiority of cultivation experiments over microscopical examination in deciding as to the existence of a cure.

TREATMENT OF ALOPECIA AND ALOPECIA AREATA. (*Med. Chron.*, April, 1898.)

PROFESSOR A. H. OHMANN-DUMESNIL (*Trans. Amer. Med. Assoc.*, 1892), after discussing the points in differential diagnosis between the parasitic and non-parasitic forms of alopecia areata, gives the following therapeutic hints. In pre-senile alopecia he advocates the administration of strychnine sulphate (gr. $\frac{1}{16}$), reduced iron (1 gr.), and sulphate of quinine (1 gr.), in pill form twice daily, or, when there are signs of "nerve starvation," syrup of the hypophosphites with strychnine sulphate. In some cases this may be supplemented by pilocarpine hydrochlorate ($\frac{1}{4}$ – $\frac{1}{2}$ gr.) at bedtime. The improvement in many cases was most marked.

In the parasitic form of alopecia he has also been highly successful, a result he attributes to the energy of his treatment. He orders the hair to be cut short, and, with a view to prevent new infection, applies to the entire scalp a solution of mercuric chloride ($\frac{1}{16}$), or a three per cent. solution of creolin. Then the affected areas are rubbed for five minutes with *sapo viridis*, gently scrubbed, and a small quantity of lanoline ointment containing mercuric chloride (1 gr. to the oz.) applied. This process is repeated twice daily, or less frequently if deemed advisable.

For alopecia areata of neurotic origin, the internal remedies used for pre-senile alopecia are advocated. Locally, the application of pure carbolic acid, freely swabbed into the part twice a week is recommended. Whilst rather painful, the treatment is said to be decidedly efficacious.

Busquet (*Annales de Derm.*, 1892, p. 269) reports eighty cases of "pelade"—in three of which the beard was the seat of disease—treated locally with oil of cinnamon (10 parts) and sulphuric æther (80 parts), and applied once a day. The hair was cut short and all washing forbidden. Some extremely obstinate cases rapidly recovered, the average duration of the treatment being from three to five weeks. These results are attributed to the antiseptic and antiparasitic properties of the oil of cinnamon.

MENTHOL IN PRURIGINOUS AFFECTIONS OF THE SKIN. DR.

COLOMBINI. (*Giornale Italiano delle Malattie Veneree e della Pelle*. March, 1892.)

DR. COLOMBINI gives his experiences with menthol in forty-four cases. He divides these into three groups.

(1.) Dermatoses in which *pruritus* is a consequence of the eruption or of the cause of the eruption, *e.g.*, eczema, the pruritus persisting in scabietics after destruction of the acarus. In all twenty-six cases.

(2.) Dermatoses in which *pruritus* is the substantive disease without any visible skin lesion, *e.g.*, pruritus nervosus. In all nine cases.

(3.) Dermatoses in which the cutaneous lesions are either wholly or partly the result of scratching, *e.g.*, urticaria and certain forms of eczema. In all nine cases.

He used the following formulæ :—

1. R Menthol grm. 5-10.
Spiritus Vini Rectificati „ 100.
M. S. Lotio.
2. R Menthol „ 10.
Olei Amygdalæ dulcis . „ 100.
M. S. Applicatio.
3. R Zinci oxidi.
Amyli pulverisati . āā „ 25.
Menthol grm. ss.—8.
Paraffini Mollis . . grm. 50.
M. S. Pasta.
4. Zinci oxidi.
Bismuthi subnitratiss āā „ 10.
Menthol „ 1-3.
Amyli pulverisati . „ 30.
M. S. Pulvis Aspersorius.

As regards Group I. the results were remarkable, all the cases of eczema being relieved almost immediately, and consequently cure was greatly expedited ;

even in a case of prurigo Hebræ in a child ætat. 12, unbroken sleep was obtained. Ichthyol had been previously tried in the form of paste, but with no great benefit in any of these cases.

Of the nine cases forming Group II. three were completely cured [pruritus cutaneus two, pruritus hiemalis (Duhring) one], four were considerably relieved [pruritus cutaneus dorsi et crurum one, pruritus cutaneus diffusus one, pruritus senilis one, pruritus cutaneus one], and two remained obstinate. Other pastes, *a.g.*, β Naphthol, ichthyol, had been previously used. In some of these cases the sensation of cold was complained of after the application of menthol; it however passed off.

Of the nine cases included in Group III. the efficacy of menthol was incontestable. All were cured. [Eczema scroti two, eczema pruriginosum diffusum three, urticaria three, eczema post scabiem one.]

In conclusion, Dr. Colombini considers menthol should always be used in cases where pruritus is the chief symptom, and its cause a nervous one. The solution of menthol in oil is, as a rule, to be preferred to that in spirit.

ALUMNOL. (*Monatsheft f. Prakt. Derm.*, Bd. xvi., No. 8, and *Berl. Klin. Woch.*, 1892, No. 46.)

HEINTZ and Liebrecht describe this new astringent and antiseptic, which is a combination of aluminium and naphtho-sulphurous acid, and contains 50 per cent. of aluminium and 15 per cent. of sulphur. It is a fine, white, not hygroscopic powder, easily soluble in water and glycerine. It is not soluble in æther. It possesses powerful reducing properties and penetrates the tissues easily and deeply. Its antiseptic properties were clearly demonstrated on bacterial cultures. Its effects are favourable in skin affections, not only in recent inflammations, but also in chronic processes, whether inflammatory or infiltrative, owing to its penetrative powers. It can be advantageously used in the forms of plaster mull or varnish. The latter, spread over the diseased area, soon dries up and constitutes the simplest and most agreeable protective dressing, both for patient and doctor. Strong solutions (20 to 50 per cent.) must be used for chronic infiltrated conditions.

THE TREATMENT OF LUPUS BY FREE REMOVAL AND SKIN-GRAFTING. (*Lancet*, March 18th, 1893.)

MR. BRUCE CLARKE read an interesting paper on this subject before the Medical Society of London on March 18th, and showed two out of the seven cases which he had successfully treated in this manner. He regarded it as a great improvement upon scraping, a series of microscopic examinations of sections having convinced him that more tissue must be removed than can be got at with a Volkmann's spoon if the disease is to be thoroughly and permanently extirpated. He also insisted upon the superiority of Thiersch's method of skin-grafting over all previous ones, as well as the necessity for the arrest of all bleeding before the grafts are applied, and suggested that a preliminary injection of tuberculin might be of service in defining the limits of the disease.

Mr. Watson Cheyne and Mr. Bidwell also showed successful cases similarly treated.

CARBOLIC ACID IN LUPUS. (*Brit. Med. Jour.*, 1892, Vol. I., p. 999.)

DR. LIDDELL of Harrogate recommends the use of carbolic acid in lupus, when salicylic acid plaster muslins have proved inefficacious or irritating. He advocates the remedy in the form of ointment—or preferably of plaster—of the strength of one in twenty or one in fifteen, to be used continuously. At first hyperæmia is diminished, and in about ten days the nodules are transformed into pustules, which then shell out, leaving pits. The application ought to be continued for a few days longer, and subsequently glycogelatine of zinc is useful to promote healing. The writer states that the treatment is painless and eminently satisfactory in its results.

ETHYLENE CHLORIDE AS A LOCAL ANÆSTHETIC. (*Wiener Med. Wochenschr.*, 1892, No. 28.)

DR. S. EHLMANN warmly advocates the use of this drug in dermatology, although we believe it has to a great extent been abandoned at the St. Louis Hospital, where it was at one time in great favour. It is applied in the form of a spray, and its action is due to extremely rapid evaporation. When anæsthesia is complete the skin is white, cloudy, opaque, and waxy-looking. Anæsthesia lasts from one to two minutes. Surrounding mucous surfaces must be carefully protected by compresses.

To anæsthetize chafed surfaces Ehrmann recommends the preliminary use of cocaine (a 5–10 per cent. solution) applied upon absorbent cotton, and afterwards the ethylene chloride to produce the deeper-seated anæsthesia. The plan is recommended chiefly for scarification and scraping of lupus, but also for opening carbuncles, buboes, and acne pustules.

ETHYLATE OF SODIUM IN PSORIASIS, PAGET'S DISEASE, LUPUS ERYTHEMATOSUS AND ULCERS. (*Rev. Internat. de Bibl. Med.*, September, 1892.)

GAMBERINI and Moroni of Bologna report the cure of an inveterate case of psoriasis by a two per cent. ointment of this drug in the course of twenty days. "Good results" were obtained in a case of Paget's disease, from the application of a one per cent. aqueous solution, and in various indolent ulcers, as well as in two cases of erythematous lupus after scraping.

THE TREATMENT OF ZOSTER OPHTHALMICUS. (*Deutsche Medez. Ztg.*, 1892, No. 90.)

BOURSOIGE advocates cleansing the part with a solution of boracic acid and afterwards dusting with the following:—

R Bismuthi subnit.
Amyli pulverat. āā 4 gr.
Iodol or aristol 0·5.

The part may then be covered with cotton-wool or guttapercha tissue. Complications involving the cornea or iris may be treated with a constant galvanic current of 4 to 6 milliampères (?).

THE TREATMENT OF HERPES GENITALIUM. (*Journ. de Med. de Paris*, 1892, No. 25.)

MONIN washes the parts if moist with a 1 per cent. carbolic solution, afterwards dusting with—

R Pulvis amyli 100 parts
Tannin 5 parts
Bismuthi salicylatis 1 part.

As preventive measures he enjoins (1) cold douches for thirty seconds to the lumbar spine twice weekly; (2) careful cleansing of the glans and prepuce night and morning; (3) moral purity.

A POWDER FOR HYPERIDROSIS. (*Union Med.*, November, 1892.)

R Washed sulphur gr. xxx.
Powdered arrowroot ʒ iv.
Salicylic acid gr. vii.

Sig. To be dusted over the feet and between the toes.

11.
12.

the
201



DR. CARNEGIE BROWN'S CASE OF "PURU."

THE BRITISH JOURNAL OF DERMATOLOGY.

JUNE, 1893.

“PURU,” A CONTAGIOUS FORM OF LUPUS OCCURRING
IN MALAYS.

“LUPUS CONTAGIOSUS MALAYORUM” (?).

BY W. C. BROWN, M.D.,

Penang.

THE illustration is a typical example of a characteristic form of lupus which prevails very largely amongst the children of the native states and the British possessions in the Malay Peninsula. As it is markedly contagious, it spreads with great rapidity amongst the Malay children, whole families being often simultaneously affected. It is so common in the rural districts of Province Wellesley and Kedah, that it is exceptional to find a Malay child who is not in some degree the victim of its ravages, while a large proportion of the adult population bear ineffaceable evidence of the distorting and disfiguring character of its cicatrices. It is more common in country districts, and finds its favourite nidus in the Malay campongs or villages where the indifference, indolence and dirt of the natives offer every encouragement to its development and spread. Although Chinese form a large percentage of the population, and although their children are to be seen everywhere associating with Malay play-fellows affected with the disease, it is peculiar in that it is very rarely transmitted from a Malay to a Chinese child. Its preference for children of Malay parentage is so marked, and its contagiousness as between Malays and Malays only is so distinctive, as to entitle it to

rank as a Malay disease. The Malay name for the affection is "Puru": and the Malays themselves are well acquainted with its characteristics, but their tendency to fatalistic beliefs is strong enough to prevent their taking any steps to stay its spread, while their unconcern as to disease generally results in a complete disregard of the necessity for treatment.

Anatomy and Pathology.—The disease commences by a small papule of granulation tissue springing up from the derma, apparently originating in the papillary layer of the cutis vera, and spreading rapidly in all directions. The nodules are characteristic of lupus vulgaris, but the pigmented skin prevents the apple-jelly appearance being easily seen, though frequently this deposit is abundant. Fig. 1* shows an elevated patch of papular growth on the upper lip, the commencement of a thick nodular swelling which is rapidly going on to ulceration. There are old "puru" scars on the chin and the back of the hand. "Puru" may commence on any part of the body, but a selective preference is shown for the face and for the aspects of extension in a less marked degree. In Cases 4 and 2 the papular growths and their preference for the face are well seen. In most cases the disease progresses slowly, and after a lengthened period, which may be weeks, but is more often years, the tubercles ulcerate, leaving a cavity with characteristic lupus nodules in place of granulations and secreting a watery and often offensive pus. Crusts occasionally form, breaking down from time to time, but more often the ulcer remains open and uncovered. The pus is highly contagious, and will infect healthy skin anywhere, without abrasion; the only conditions apparently required being that there shall be a sufficient quantity of dirt and a sufficient disregard of ablution. At the edges of the ulcers the skin is thickened and inflamed, but there is seldom any burrowing under the edges. Though the ulcers are, in many instances, of great depth I have never seen them attacking other structures than the skin and the connective tissue of the superficial fascia. But the cartilages and bones of the nose are occasionally exposed, and more rarely bones and ligaments near the great joints.

Inquiries on pathological lines into the origin of the disease seem to establish the fact that it is neither a "syphilide" nor a "scrofulide."

* The author's manuscript was illustrated by a number of interesting photographs, which the Editor regrets he is unable to reproduce.

In Province Wellesley, the existence of parental syphilis in most "puru" cases was, as far as is possible by evidence, completely disproved. On the other hand scrofula as a disease is uncommon amongst Malays, and the victims of "puru" cannot, either by heredity or personal history, be generally shown to be of this diathesis. But, probably, in this it resembles rather than differs from lupus vulgaris, for it is well known that that disease does not generally occur in subjects who have given signs of their being of the tubercular diathesis. It is interesting to notice the well-nourished appearance of the children in the accompanying photographs, as compared with the emaciation and dyscrasia of the majority of lupus victims at home. I see that Kaposi* and many authorities now assert that lupus vulgaris is not a tubercular disease at all, and that it has no relation with the tubercular diathesis. Be this as it may, as far as "puru," its very near relative, is concerned, there can, I think, be no doubt that the disease is an entity produced by local infection, and that it has no relation to constitutional tendency, or to "system disease."

Another point of interest is the method of cicatrization of the ulcers. In the cicatrices fibrous tissue predominates very largely, so that a condition of keloid is not unfrequently seen. In one of the annexed photo's there is a large patch of keloid on the right cheek which is not very well brought out, and the other scars on the face and body are simply discs of fibrous tissue.

Further analogies and affinities with lupus vulgaris are close and striking. Mr. Hutchinson defines† lupus as "a chronic serpiginous inflammation of the skin, clearly infectious, producing satellites; and which, when it undergoes resolution, leaves the integument in a condition of cicatrix." If the word "infectious" here is taken to imply hetero- and not auto-infection, the definition accurately fits this disease. It differs from lupus in this contagiousness, though it does not appear improbable that lupus, if left to run wild amongst European children as this is amongst Malays, would acquire and develop equally infectious properties. One case of "puru," of which unfortunately no photograph could be obtained, had all the character-

* *Fagge's Medicine*, p. 1003.

† *Archives of Surgery*, Vol. I., 386.

istics of lupus erythematosus, with the butterfly-shaped distribution of spots on the face very well marked.

Etiology.—Both sexes are equally affected. The predisposing cause is want of cleanliness, and the exciting cause infection. At first, it was considered that Chinese owed their exemption to greater cleanliness; but, besides this, they seem to have special powers of resisting the disease. In one case occurring in a European child from direct infection, the appearances much resembled "lupus marginatus" as described by Mr. Hutchinson.

Treatment.—This disease being benign in nature, does not seem to demand the energetic applications of caustics, cautery and scraping that are accorded to lupus. It is in any case difficult to persuade Malays that any disease will be benefited by radical treatment. Obviously cleanliness and antiseptic lotions are of the first importance. I have found a lotion of Jeye's Purifier (1·100) as good as anything, followed by dry application of iodoform, salicylic acid and hydro-naphthol to the sores.

Remarks.—Dr. Brown's paper having been forwarded by Dr. Patrick Manson for publication in the *British Journal of Dermatology*, the Acting Editor has requested me to append a few comments upon it. As I have not acquired any practical acquaintance with the maladies herein discussed in the countries where they are endemic, I must plead the Acting Editor's wishes as an excuse for undertaking the ensuing remarks.

Dr. Brown's paper is a very interesting and acceptable contribution to our knowledge of a group of maladies not yet completely elucidated, and, now that the author has shown that his zeal and ability are capable of surmounting the difficulties surrounding investigation when attempted far away from the conveniences and stimuli of centres of work, it is to be hoped that he will undertake further inquiries.

The two diseases which occur to one on reading the author's recital are, (1) The endemic malady to which the terms *Oriental Sore* (Tilbury Fox and Farquhar), or *Lupus Endemicus* (Lewis and Cunningham), or *Bouton Endémique d'Orient ou des pays chauds* (Besnier), or *Furunculus orientalis* (Crocker), have been applied, and (2) *Framborsia* or *Yaws*, or *Polypapilloma tropicum* (Charlouis of Samarang).

We should always remember, however, that in far countries like

the Malay Peninsula, local names for disease may be generic and include under one heading a number of distinct affections. For instance, in Ceylon the term Parangi was probably at first restricted to syphilis, but at the time Dr. Kynsey furnished his Report, Parangi included a number of distinct diseases, principally (1) Syphilitic diseases in all stages and forms; (2) *Framboesia* or Yaws, or a disease closely allied to it; (3) *Lupus vulgaris*; (4) Ordinary scrofulous ulcerations with enlargement of glands; (5) Common forms of skin disease. So too in Persia it is probable that a number of distinct affections are confounded with "Oriental Sore," under the common term "Aleppo Evil." As far, however, as we can judge from Dr. Brown's paper with its accompanying illustrations, he has carefully avoided this error.

It may here be noted that Nicholls of Dominica expressed his suspicion, chiefly from the presence in both diseases of a yellow crust, that Yaws is closely allied to, if not identical with, these little known African and Asiatic diseases, *i.e.*, "Oriental Sore." This suggestion, however, cannot be accepted. There seems to be little room for doubt that the one is a purely local inoculable affection, the other a local, inoculable, and, subsequently, a "constitutional" malady, running a course on lines so parallel with syphilis, that it is plausibly suggested that Yaws is indeed a phase of syphilis. We now possess careful descriptions of *Oriental Sore* and *Yaws* from many parts of the world, and there is a remarkable uniformity of agreement in all essential points for each disease. Minor differences of description certainly exist, but these may be attributed to some modifications of each disease brought about by climate, the stamina of those attacked and so on, or to imperfect observation and description. We are thus at the present time in a position to form a fairly complete picture of these maladies, and to affirm the clear distinction between them.

Dr. Numa Rat, who has studied Yaws in South America, the West Coast of Africa and the West Indies, gives the following definition of Yaws:—"A tropical, endemo-epidemic, chronic, diathetic, exanthematous, neoplastic, contagious, non-infectious, inoculable disease, unattended by specific adenopathies,* and ushered in, after an

* Rat holds that though there may be some sympathetic, there is no specific, glandular enlargement as in syphilis. Charlonis, however, states that in both Yaws and syphilis there is a general polyadenitis.

incubation period averaging from three to ten weeks, by fever and muscular and articular pains which may be severe or scarcely perceptible. The eruption, at first papular, gradually develops into tubercles consisting of encrusted masses of cellular tissue, which, originating in the derma, protrude through the epidermis, discharge a non-purulent, acid fluid, and usually disappear by interstitial absorption in from three to twelve months. Under unfavourable circumstances, the neoplastic growth infiltrates the surrounding tissues, both superficial and subcutaneous, undergoes necrosis, and excites destructive inflammation of the deepest tissues, occasionally involving even the bones." Rat suggests four stages. There is firstly an *incubation stage*, between the moment of the reception of the virus and the development of the initial lesion at the seat of contagion. The incubation of the Yaws virus averages from three to ten weeks, mostly the shorter time. There are no special symptoms, but Rat has observed the skin to become dry, the epidermis to shrivel, the papillæ prominent, patchy loss of pigment, some anæmia, etc. Then comes the *primary stage*, or period between the appearance of the local initial lesion and that of the general superficial eruption. Rat insists that there is a primary *non-indurated* lesion connected with Yaws, which is as characteristic of the affection as the chancre is of syphilis; and is most frequently developed on the lips, the breast (especially about the areola), the groin, the genitals and the perineum. Without occupying space with a detailed description, it may be stated that this initial lesion varies from slight subcutaneous infiltration inappreciably raised above the level of the skin to a deep-seated larger nodule which may pustulate, or it may assume the form of a more superficial papule, which becomes capped with a yellow fluid at its apical third, and may ulcerate and become encrusted, or "when the contagion has entered the body through a granulating wound or an ulcer, the disease manifests itself at the point of entrance, in the form of a non-encrusted mass of granulation tissue similar to that of the tubercles of the secondary stage." Charlouis states that, when inoculated experimentally, a *soft* ulcer-like boil or a fungating nodule is produced. Garvin (Kynsey's Report) says that "the disease is nearly always preceded by an ulcer, generally situated above some bony prominence and caused by scratching." Charlouis says the incubation stage may last three to five months, Garvin that

it varies from two weeks to two months, but these authors do not define the incubation stage so precisely as Rat. There seems to be a general agreement that in a healthy subject the initial lesion disappears shortly before the onset of a generalized eruption.

The *secondary stage* is the period comprised between the commencement and termination of a general superficial eruption. These secondary eruptions are preceded or accompanied by paroxysmal fever and muscular and articular pains, either of little intensity or of great severity, by various symptoms indicative of systemic intoxication, and occasionally by tubercles in the nasal fossæ and auditory meatus, by contractures of the flexor muscles of the limbs, and by slight, non-suppurative inflammation of the periosteum covering the cranium, clavicle, sternum, ribs, ulna, tibia, and metatarsal bones. Within certain limits there is a good deal of diversity in the descriptions given of the secondary eruptions. Rat gives the following recital of a typical case in a healthy child in Africa, and other descriptions correspond very closely. The patient becomes covered from head to foot with minute red itching spots, like *Lichen tropicus*, beginning on the head (the scalp very slightly affected), and evolving from above downwards for about three days. After the third day of their existence the greater portion of the rash begins to fade, but a comparatively small number of the lesions gradually become converted into more or less conical papules from the fourth to the sixth day, according to their age. Various causes interfere with the copiousness of this papular eruption. On the seventh day from the first appearance of the secondary eruption, the apical third of the papule begins to acquire a pale yellow tint (not pus), beginning on the earlier lesions and becoming general by the end of the ninth day. Then over a fortnight the papules expand to average $\frac{1}{4}$ inch in diameter and $\frac{1}{8}$ inch in height, and become cylindrical; the pale yellow cap enlarges in proportion and becomes dome-shaped, and a thick yellow crust forms, which, when removed, discloses a creamy secretion, *acid* at first, covering granulation tissue, which, in anæmic and old-standing patches, becomes more or less decolorized, and under conditions variously tinted: over the next four weeks the lesions pale and shrink up, and the scabs become brown and thin, settle down to the level of the skin, fall off, and leave persistent macules, which are comparatively light coloured at first. In this stage there is anæmia

and other evidence of general disturbance of function. Rat points out that this type is altered within certain limits by nationality, age, individual constitution, intercurrent exanthems, exposure to cold, injudicious treatment, and so on. The variations from this type are due (1) to the number of lesions present, which may range from a single one upwards; (2) to the coalescence of lesions forming large continuous patches or rings, the latter especially round the eyes, nose, mouth, or anus; (3) the character of the secretion from the granulation tissue; (4) the recurrence of eruptions first on one region and then on another; (5) modifications produced by special sites, as the absence of crusts round the anus, and the compression, etc., of the lesions beneath the thick skin of the palms and soles; (6) more or less persistent ulcerations, mostly encrusted. The normal course of lesion going through the full development is about six weeks, "but, in those among whom the disease generally prevails, *i.e.*, the unhealthy, ill-fed, and badly-housed, the average duration of the eruption is about nine months, when no treatment is used." In favourable circumstances the duration may be shorter, and under unfavourable conditions may continue by recurrence for several years.

Reference has thus already been made to the varying degrees of intensity of the secondary symptoms and to the range of duration of these symptoms. There may be, however, a *tertiary stage*. "When, either from individual predisposition, constitutional debility, injudicious treatment, or insufficient or improper food, the system is unable to expel the disease during the secondary period in which the lesions are limited to the skin and other superficial tissues, the deeper structures then become invaded, and those changes are brought about by which extensive destruction of deep tissues are effected." These tertiary symptoms comprise chronic, non-encrusted ulcerations of the secondary lesions, superficial serpiginous ulcerations, beginning in small subcutaneous nodules, especially about the legs; ulcerations originating in dome-shaped subcutaneous nodules, similar in appearance to the gummata of syphilis; destructive ulcerations of the nares, pharynx and soft palate occurring as late as twenty years after the secondary symptoms; painful subperiosteal nodules over the clavicle, sternum, ulna, tibia, and the metacarpal and metatarsal bones; painful diffused chronic periostitis; dactylitis; chronic indolent inflam-

mation of joints like "white swelling"; contractures of the flexor muscles and myositis; profound cachexia in severe cases. "An individual in whom any of the tertiary symptoms of Yaws have appeared may be certain of being affected at intervals by the same or by a series of others of greater or less severity, while living under conditions which cause the health to deteriorate."

It remains to be added that Yaws is probably not hereditary; that it is highly contagious *in its secondary stage* by direct contact where breaches of surface exist; that it can probably in exceptional cases be contracted a second time. Auto-infection seldom, if ever, occurs. There is also some ground for believing that it attacks some of the lower animals, such as fowls.

"Childhood is the period of life at which Yaws is usually contracted," possibly owing to the scantiness of children's attire, their frequent contact with others, and the prevalence of breaches of surface from itch, etc. Infants are, however, very seldom attacked. Most writers bring out the fact that quite commonly several members of a family may be attacked epidemically, and in Ceylon, for instance, a large proportion of the inhabitants of some villages may be infected. It should be noted, however, that Charlouis of Samarang states that only in rare cases has he seen two children of one family affected.

In Ceylon cases of all degrees of severity are met with, though differences of opinion exist as to the nature of the so-called tertiary lesions, *i.e.*, whether they are part and parcel of the Framboesia or only syphilitic complications. It is a remarkable circumstance that Charlouis of Java did not observe these "tertiary" symptoms, but saw only a benign affection.

With regard to *racial proclivities*, Rat, speaking presumably of the West Indies, states "that no race is exempt from the disease, though the Africans are the most commonly affected and, next to them, those of mixed African blood. Its comparative rarity among Europeans is due rather to their avoidance of contagion than to racial immunity. It is capable of attacking East Indians and Caribs with as much severity as Africans;" Nicholls writes to the same effect. Other races are seen to be attacked in Polynesia, and it is remarkable that, according to Charlouis, it occurs amongst all the inhabitants of the East Indian Archipelago, but least amongst the Africans and Europeans residing there. In Ceylon the disease is not confined

to the Singalese, but occurs amongst the Malabars, Moors, Tamils, and occasionally others.

The geographical distribution is interesting. It appears to be a tropical disease according to Rat. It prevails in the West Indies, to some extent, probably, amongst the negroes in North America, in the warmer latitudes, and especially in the Southern States, Mexico, Central America, South America, but not further south than Brazil and Venezuela if Verrugas be excluded, the West Coast of Africa between the Senegal River and Cape Negro in Benguela, the East Coast of Africa, in the islands of the Mozambique Channel, including the Comoros and Madagascar, the central parts of Africa, such as Ashanti, Bernu, Timbaktu, etc., whence cases probably spread occasionally further north along the Nile and into Algeria, Ceylon, the Coromandel Coast, the East Indian Archipelago, New Caledonia, Loyalty Islands, Samoa or Navigator's Islands, Fiji. Huillet, quoted by Hirsch, refers to its existence amongst the Hindoos in Pondicherry.

The close parallelism of this disease with syphilis in its course and symptoms and amenability to mercury and iodide of potassium must strike every one. Mr. Hutchinson has pointed this out in the able criticism which forms a preface to Rat's monograph, and it is not surprising that some observers have considered Yaws a phase of syphilis. The final verdict must remain open until we have some more precise information on crucial points, or until histological and experimental researches have determined the point. Meanwhile it would appear that Yaws, where endemic, never gives rise to the type of syphilis known in extra-tropical regions, but always breeds true, whatever the race the sufferer may belong to. It is asserted that syphilis may occur in a Yaws patients and *vice versâ*, and Charlouis makes the statement that he has satisfied himself by experiment, that the two diseases are distinct. The Yaws eruption, though presenting some variations, is said not to exhibit the polymorphism of syphilis.

The mucous-tubercle-like eruption, and the tertiary symptoms would pass for modified syphilis. We need further precise information concerning the occurrence of Yaws in animals, and the alleged absence of throat and eye symptoms, the induration of the glands related to the initial lesion so characteristic of syphilis, orchitis, and

visceral lesions. Mr. Hutchinson has brought forward an ingenious argument in explanation of the fact reported, that the children of parents who have suffered from Yaws are free from symptoms of hereditary syphilis. Still it is difficult to get over the observation frequently repeated that parents actually suffering from Yaws beget healthy children.

The point that it is necessary to bring out on the present occasion is that in Yaws we have a disease which, to say the least, bears a striking similarity to syphilis in its course and symptoms, and behaviour during the administration of certain drugs. Like syphilis, it may be benign, as in Java (Charlouis), or more or less malignant.

For a recent and authoritative account of "Oriental Sore" we turn to the Appendix of the translators of the second French edition of Kaposi's "Lectures on the Pathology and Treatment of Diseases of the Skin." It is there described as a cutaneous affection of external origin, without visceral complications, which develops, in certain seasons in certain years—*e.g.*, from September to February—in a great number of regions and isothermic localities, provisionally fixed as contained in a zone extending from Maroc on the West to the Ganges in the East, and comprised between the 10th and 14th degrees of latitude N. This distribution is not coincident with that of Yaws. It is contagious in all degrees, auto-inoculable, inoculable, and reinoculable indefinitely, and develops upon domestic animals. It may attack any person at any age, and occurs chiefly upon uncovered parts of the skin—*e.g.*, the extremities, the face (not the scalp), rarely the trunk, exceptionally the genital organs. The number of lesions evolving may be from one to twelve, or occasionally forty to fifty. In inoculation experiments, when the exciting agent is conveyed at once to the tissue suitable for its development, the lesion develops at once and rapidly. Under conditions, which are experimental, a variable interval elapses before the appearance of the lesions, probably occasioned by the time occupied by the causative agent reaching a suitable culture medium. Once the growth arises it proceeds actively. A little "tache," or insignificant elevation, occurs analogous to a great number of other simple inflammations from other causes. In a few days a central crust forms, covering an orifice from which pus wells up on pressure, and on removal leaves a desquamative fringe. The "bouton" may, however, develop without

these stages on a pre-existing wound. The lesion may now abort and remain without further development, but ordinarily it persists, and similar satellite lesions (averaging six to ten) group themselves around the primary one, and united by a rosy or earthy groundwork, the whole forming rounded or irregularly oval patches. Besnier says the colour is unlike that of syphilis, and the patches are *absolutely characteristic*. If the crusts are detached by a poultice a number of characteristic rounded ulcerations are exposed. There may be slight itching and but little pain. If the patch is untreated and remains, the disease process extends in superficies and depth. Yellow points dot the bordering zone of irritation. The excretion forms dry, resistant, stratified crusts, varying in colour according to the degree of admixture of blood, pus, etc. The individual ulcers may join together meanwhile, and the surface become more or less vegetative. The discharge is not very abundant. Only exceptionally does the ulceration take on a grave aspect. The evolution lasts two to six months without general reaction and without constant or important glandular complications. Cicatrization is inevitable in all cases not arrested in the early stages. The total duration of the malady must obviously vary widely, according to the degree of ulceration, the health of the individual, etc. One attack does not protect the individual from fresh attacks, except possibly in some subjects. The affection is not amenable to the internal administration of drugs.

We have taken this description from the source above stated, but it will be interesting to introduce a few observations made by Vandyke Carter in Crete and Wortabet of Beyrout. Carter says that strangers are not specially attacked, but this has not been the experience at Delhi and other places. Children, says Carter, in Crete are probably most liable, and it may spread in a family, and from village to village, so that whole villages and schools are sometimes infected. Wortabet wrote that in endemic areas no native or foreign sojourner escapes attack. Children born in the districts may be infected during the period of the first dentition. This special selection of children is very marked then in Crete and Persia. In Algiers and India it should be noted that the civil and military population sojourning in the endemic areas are frequently attacked as well as the natives.

The conclusion I form is that "Puru" is the "Oriental Sore or Boil." The description given by Dr. Brown seems to me to agree most closely

with that malady. Slight though unimportant differences between the Biskra Bouton and Crete Boutons were pointed out by Carter, and we must therefore allow for such variations. For instance, in Dr. Brown's photographs the chest appears to be frequently involved, but this may be due to the exposure of such regions to infection. Again, the immunity of Chinese and others may be explained by their comparative cleanliness and isolation. The lesions in the photographs correspond very closely with those of "Delhi Boil" in my possession.

T. COLCOTT FOX.

CLINICAL NOTES.

CHRONIC MILIARIA PALMARIS ET PLANTARIS.

BY H. RADCLIFFE CROCKER.

MILIARIA is generally an acute disease, the usual duration of which is a few days to a few weeks, though occasionally it may last all through a hot season. It occurs mostly on the face and trunk, less often on the limbs, but I am not aware of any case being recorded in which the lesions were limited to the palms and soles and had persisted for several years. Yet all these features were present in the following case, which must be referrible, I think, to miliaria. The patient was a woman æt. 56, who was sent to University College Hospital on May 6, 1893, by Dr. Tate. The history was that the rash had been present for five years, varying in extent and activity, but never absent. It began when she was suffering from bronchitis and was perspiring very profusely.

The eruption was scattered rather thickly, without any grouping or arrangement, over the whole palmar surface, but on the soles was limited to the under surface of the arch of the foot. All stages were present together, and it was therefore possible to trace the course of the eruption. The earliest stage was a pin's-point-sized pustule, seated at a sweat-pore and surrounded by a semi-translucent reddish area, the whole lesion being not larger than a small pin's head. The pustular portion enlarged to the size of a millet-seed, still with the narrow areola evidently due to clear fluid beneath the epidermis. This lesion dried up into a horny plaque about one-twelfth of an inch in diameter, with a brownish-red centre, and when this was thrown off it left the new healthy skin beneath surrounded by a white scaly colour, which was simply the boundary of the cast-off horny plaque. There were thus three elements of very different appearance which marked different stages. 1. Small pustules with narrow areola; 2. minute brownish horny plaques; 3. superficial depressions with scaly rim where the

plaques had been cast off. There has not been sufficient time to see the result of treatment.

RINGED HAIR.

Only a very few cases of ringed hair are on record, so that a new one is worth reporting. The patient was a girl nearly eight years old, the child of wealthy parents, and the condition in question had been noticed by the mother about two years; before that she was sure that the hair was natural and quite silky. The mother dated the change from its occurrence soon after contagious ophthalmia, which followed what she believed was influenza. The child was pale and excitable, but otherwise in fairly good health. Naturally she had rather dark hair, but under the advice of a hair quack peroxide of



The upper figure shows a portion of the middle of the shaft seen by reflected light, showing air-bubbles in masses much longer than the normally pigmented hair. The lower figure shows the root end viewed by transmitted light with a ray of reflected light to show the commencement of the infiltration with air in the medulla at the right end of the figure.

hydrogen and turpentine had been applied, and as usual it had turned all except the portion nearest the scalp to a golden tint. In certain lights the alteration was distinctly visible to the naked eye, the hair having a mottled appearance, and when one was pulled out and examined with a lens, alternate bands of light and dark could be readily seen. The hair also looked as if it was of slightly larger diameter opposite the light part, but this was only optical; when examined by the microscope no difference in diameter was observable in this case, but in some other cases slight differences have been noticed, the light area having a slightly larger diameter than the dark. When examined by the microscope by transmitted light, the light areas looked dark like pigment masses, but by reflected light

they could be shown to be air-bubbles. These in some places filled the whole diameter of the shaft in longitudinal heaps, which extended to at least four times the length of the dark area which was the normal portion of the hair. The light and dark parts did not always bear the same proportion to each other. Unlike a previous case already recorded by me affecting the moustache, the air clumps were very elongated and often gradually fined off at one end. There was no uniformity about this however, the elongation being sometimes towards the proximal and sometimes towards the distal end. The infiltration commenced in the medullary portion of the shaft just above the root, and extended along the whole shaft. Probably, however, the hair broke off, as the mother stated that the hair was not so long as it used to be, and did not seem to grow at all. The whole scalp appeared to be affected, but the condition was most marked on the left side. While we may safely assume that the phenomenon is a consequence of a trophoneurotic change, probably from influenza, this explanation does not carry us very far, nor does it explain how the air is formed in the shaft, and still less why it should be produced in segments alternating with normal segments.

The sudden blanching of the hair from severe mental emotion is an analogous phenomenon as far as the development of air in the shaft is concerned, while the alternating arrangement of the light and dark appearances may be compared to the thinning and apparent thickening of moniliform hair.

Besides these two cases of my own, I only know of that of Erasmus Wilson, the case of which the hair is in St. Bartholomew's Hospital Museum, and that of Karsch, recorded by Landois. The case of E. Lesser, recorded as a case of ringed hair, from Figure 3 of his plate, is evidently referrible to moniliform hair.

HEREDITARY ALOPECIA NEUROTICA.

I AM indebted to Mr. Loxton, of Birmingham, for the opportunity of seeing the two following cases, a girl and a boy. The father has been completely denuded of hair from the age of ten, when it came off in patches, and he has never regained it. He has not lost his nails, but their exact condition I am unable to state, as his wife

brought the children. The father is the fourth child, and three sisters and a brother are unaffected. His mother lost her hair in patches when she was eleven years old; it grew again, but a year later, after typhus fever, she lost it all again. After repeated shaving and other treatment it came on, but only thinly; but she retained it until she was over twenty years old, when she had her first child. Shortly afterwards she lost all her hair again, and has not had a single hair since. The condition of the nails is unknown.

The girl, *æt.* six years, has red hair, and two years ago a bald patch appeared in the occipital region. This has partly regrown, but is still very perceptible. The hair is gone on each temporal region in front, but the border is not well defined. There is, however, a perfectly bare, well-defined patch, the size of a sixpence, symmetrically placed on each parietal region, and the hair round is slightly loose there, but nowhere are there any hairs. The eyebrows and lashes are unaffected, and she has down all over the body. The finger-nails are very finely pitted uniformly all over, and have no lustre, but the mother was not aware of the change in them.

The boy, *æt.* three years and nine months, has no definite bald patches, but there is a band two inches wide at the lower border of the scalp on each side, where the hair is manifestly thinner than the rest, but the band does not extend to the nape. There is also an ill-defined patch where the hair is thin at the right temple, near the front, and in front at both temples the hair is thin. No (!) hairs were to be found. The nails are not well polished, but otherwise are unaffected. Both children are highly nervous, but in this respect they take after the mother; the father is not at all a nervous man. Their general health is fairly good. It is evident, from the history of the above cases, that they are quite different from the ordinary type of Alopecia areata. Apart from heredity, the absence of (!) hairs and the condition of the nails would, in my opinion, point to the condition being neurotic, not parasitic. Baldness in patches extending through three generations is, I believe, unprecedented; but in the sixty-ninth volume of the "*Medico-Chirurgical Transactions*" Mr. Hutchinson records the case of a boy, *æt.* three and a half years, with congenital baldness of the scalp and general atrophy of the skin, whose mother had been bald from Alopecia areata from the age of six years.

DIFFUSE ERYTHEMA PRODUCED BY THE INTERNAL ADMINISTRATION OF ARSENIC.

BY R. H. NICHOLSON, M.B., C.M., EDIN.,

Colchester.

As this case is an instance of a rare condition, I think it may be of sufficient interest to justify its record.

The only other case of which I am aware, reported, I believe, by the late Dr. Fagge, was inconclusive, as quinine had been administered along with arsenic. The history of my case is briefly as follows:—

The patient, 28 years of age, of fair complexion and anæmic, suffers from nervous dyspepsia, and had been troubled for some weeks with recurrent crops of boils on the neck.

When seen, I found three boils developing. They had reached the size of split peas, with some surrounding induration.

I ordered him three minims of liq. arsenicalis to be taken immediately after food three times a day, and to be well diluted.

On visiting him two days afterwards I found the furuncles aborted, and instead, he was covered with an universal erythema, which itched very much, was smooth and soft to the touch, and disappeared momentarily on pressure. This intense hyperæmia was least marked on the face and neck, most so on the abdomen, chest, thighs, and upper arms, the skin presenting in these regions quite a "boiled lobster" appearance. There were numerous papules on the fingers. There was also slight congestion of the conjunctivæ, and he had had some diarrhœa during the night.

The tongue was clean. Pulse 65, and temperature normal. There was no throat redness, glandular enlargement or catarrh. I assured him that the erythema was produced by the arsenic he had taken (five doses, *i.e.*, m 15 in all), and not scarlet fever, as he thought.

The rash quickly disappeared on leaving off the arsenic, the patient being given diuretics. There was very slight furfuraceous desquamation.

My patient is a chemist, and he told me that ten years ago, while an apprentice, he had suffered from a severe attack of eczema,

while working with arsenic, in the process of making wheat-dressing, and that he generally suffers in the autumn from a slight attack from a like cause.

[NOTE.—The scattered literature bearing on this subject is not very readily accessible, but our readers will find the most convenient source of information in Dr. Prince Morrow's work on "Drug Eruptions;" an edition of which, prepared for the New Sydenham Society by Dr. Colcott Fox, is, we believe, in the press; and in Dr. Rasch's article, *Ann. de Derm. et de Syph.* t. iv, 1893.—Ed.]

REVIEWS.

DISEASES OF THE SKIN.*

THIS work, which is designated an introduction to the study of diseases of the skin, is a reprint with some variations of, and additions to the chapters by the author dealing with these diseases in the various editions of the late Dr. Hilton Fagge's unfinished work on medicine. No claim is made for completeness, the recent additions being, according to the preface, drawn only from the author's contributions to the *Glasgow Hospital Reports* and the *Pathological or Clinical Societies' Transactions*. We are glad, however, to notice that a considerable number of them have been derived from the pages of this Journal, but it is a matter of regret that the work of the Saint Louis School incorporated in the *Annales de Dermatologie* and of the modern German Schools embodied in the *Vierteljahrsschrift der Dermatologie* and *Monatshefte für praktische Dermatologie* should be passed over in absolute silence. Doubtless these omissions are intentional upon the part of the author, whose main object it has been to make his descriptions as much as possible an epitome of what he has himself observed, but we cannot but consider them none the less regrettable, as the criticisms of so keen and judicial a mind as that of Dr. Pye-Smith upon views, generally eminently suggestive but often admittedly crude, would not only be of the highest interest but also of great practical value. To render the work abreast of the times this addition must be made in future editions. The views of the elder Hebra are closely followed throughout, with even more than the customary contemptuous expressions of unbelief—frequently reiterated—"in the whole doctrine of temperaments and diatheses," a subject upon which the author has written elsewhere with force and eloquence.

* *An Introduction to the Study of Diseases of the Skin.* By P. H. PYE-SMITH, M.D., F.R.S., Fellow of the Royal College of Physicians, and Physician to Guy's Hospital. (J. and A. Churchill, 11, New Burlington Street.) 1873. Pp. 367.

Dr. Pye-Smith makes little or no attempt to arrange skin diseases in natural groups according to "up-to-date" ideas or aspirations, and his views on the subject of the classification of diseases in general are thus expressed in his introductory chapter:—"Any arrangement of diseases is valuable so far as it helps the memory to retain useful facts; any arrangement is useless or mischievous if it pretend to be a universal or 'natural' or 'scientific' system. Diseases are not natural objects; they are physiological states, which we sometimes define by their cause, as plumbism and scabies; sometimes by their histology, as sclerosis of the spinal cord and epithelial cancer of the lip; sometimes by their constancy in transmission, as measles and typhus; and sometimes by more or less constant concurrence of symptoms, as chorea and epilepsy."

He then proceeds to exemplify "how cutaneous disorders may be classified on different principles, each of which is important but none exclusively eligible," thus:—

I. *Diseases of the Skin regarded as Physiological Processes (Pathological Arrangement).*

II. *Diseases of the Skin regarded as the Result of Antecedents (Ætiological Classification).*

III. *Diseases of the Skin regarded as Objects of Cure (Therapeutical Classification).*

IV. *Diseases of the Skin regarded in their Subjective Effects.*

V. *Diseases of the Skin regarded as Anatomical Conditions of certain Layers, Organs, or Regions.* A, Bathymetric Distribution; B, Distribution to Organs; C, Surface Distribution.

VI. *Diseases of the Skin as they specially affect different Ages.*

From many statements in this portion of the work which we think open to criticism we would extract the following. Under heading I. *Rupia* is described as "localized in blebs," and *xerodermia* as an "anomaly of secretion"; under II. we find the terms "bromide-acne," "hydroa from iodide," and "prurigo pedicularis"; Class III. appears to us altogether too problematical to be of use, and we fear the inferences to be drawn from it are decidedly misleading, while the mere suggestion of such a classification as IV. is a *reductio ad absurdum*. We note that in Class V. *Molluscum* and *Lupus Erythematosus* are considered as diseases of the sebaceous glands, while under Class VI. "*Strophulus*" is resuscitated as a disease of infancy.

The importance of studying the *surface distribution* of skin diseases is duly enforced, and throughout the work laudable diagrams of the distribution of the commoner cutaneous affections are inserted. There can be no doubt of the general utility and accuracy of these, but we admit that we are of the opinion that the author in them has committed a few errors both of omission and of commission, chief among the former being the absence of any diagram of the distribution of seborrhœic disorders. Again, while *symmetry* is justly admitted to have "a special meaning"—viz., "that exactly the corresponding parts on the right and left sides are simultaneously affected," no further importance—no deeper significance—is attached to it.*

The chapter on Eczema must always be regarded as the most important in any treatise of dermatology, and as giving the key-note to its general spirit and tenour. Here we have the subject admirably handled, but from the standpoint of our knowledge twenty years ago, the only divergence from the conception of the disease as enunciated by the elder Hebra being the separation of "traumatic dermatitis" from true eczema, which is defined as "idiopathic, common, superficial dermatitis"; and this differentiation is not consistently maintained, as trade eczemas are afterwards described as "traumatic forms of eczema." Only "local varieties" of eczema are described, no reference being made to the various attempts made to distinguish various "types" of the disease, beyond a very passing one to "single patch eczema." Recent, or comparatively recent works, indicating the probable participation of seborrhœic and sweat disorders, of the agency of parasites (in the true sense of the word), of the influence of disordered states of the central nervous system in the etiology of various now generally recognized types of eczema receive no attention, while no attempt is made to estimate the relative importance of the "trauma" of scratching as a factor in some of the local varieties of eczema (*e.g.*, vulvæ, ani), which many authorities are disposed to regard as essentially neuroses and not varieties of eczema at all.

We regard these omissions as not only unsatisfactory in the interest of the student to whom—rather than to the expert—the book is pre-

* In a most kind private note on this subject to the writer Dr. Pye-Smith says, "My notion is that symmetrical parts are affected because their *structure* and *development* and *circumstances* and *inheritance* are more nearly identical than any other parts."

sumably addressed, and who is expected to be cognizant of modern theories, but as remarkable, or even inexplicable, on the part of the author, especially in view of his attitude towards the hypotheses of temperament and diatheses previously alluded to. For eczema must have *some* cause!

As a natural result, the indications and remedies for the treatment of eczema, although considered at due length, are incomplete in some respects, various recent methods of treatment founded upon theoretical etiological considerations being entirely omitted. No plans for the continuous application of powders or lotions are described; no directions are given for the employment of such excellent remedies as sulphur, salicylic acid, and ichthyol sometimes prove themselves to be; no mention is made of the value of pastes, varnishes, glycogelatines, or of counter-irritation, *e.g.*, over the spinal column.

With Dr. Pye-Smith's remarks on the internal treatment of eczema we cordially agree; many of the therapeutic hints embodied in the original edition we have adopted for years, and can confirm their value. Of these the following may be particularized:—The superiority of chloral over opium in children as an antipruritic and sedative, the value as such in old people of henbane in full doses and hop, and of quinine in children, the occasional potent influence of arsenic in very chronic scaly cases.

Paget's disease of the nipple is unhappily described under the title of Eczema, although the points of differentiation between the two conditions were graphically laid down by the distinguished observer whose name is indissolubly associated with the disease, in his original article on the subject, and although the morbid histology is characteristic from the first.

Impetigo is also described in the chapter devoted to Eczema, and is attributed in the majority of cases as due to the "irritation" of pediculi, although the various steps in the pathological process receive no attention beyond the detached statement later on that "the contagious quality of pus depends on the presence of one or more species of staphylococcus."

In the chapter on the papular forms of chronic superficial dermatitis, the diseases included are Lichen and Prurigo. Under the heading Lichen are described the conditions formerly known as L. circum-

scriptus, *L. tropicus*, and *L. (Keratosis) pilaris*—considered as identical with *L. pilaris* of Divergie—*L. scrofulosorum*, and even various forms of “*Strophulus*,” to the consideration of which a full page is devoted. Dr. Pye-Smith adopts the view held by many that the *Lichen planus* of Wilson and the *Lichen ruber* of Hebra are different types of the same disease, but the existence of *Lichen ruber acuminatus* as a separate disease is not discussed; no mention is made of the erythematous, the miliary, the hypertrophic and verrucose stages of some cases of *Lichen planus*, nor of the eczematoid condition which sometimes results from scratching, and which masks the nature of the essential lesions. We regard these omissions as of importance because failure to recognize these phases and complications accounts in great measure for the prevalent error that *Lichen planus* is a very rare disease.

Psoriasis is dealt with in one of the best chapters in the book, and here the author's large experience is successfully brought to bear, but he has no suggestions to make as to its real etiology. Among other interesting points we note that he has observed four or five cases in which true psoriasis and a secondary syphilitic eruption existed in the same patient, ran independent courses, and were cured by different treatment. We have had the good fortune to observe three similar cases. The method of employing chrysarobin in the form of a varnish is discussed in a footnote, as if it were a novelty, and apparently the writer has given no trial to Haslund's method of treatment with large doses of iodide of potassium, although he casually refers to it.

The discussion of the question of the etiological position of lupus and the various forms of “scrofulide” strikes us as peculiarly old-fashioned. The statement that it is “extremely rare” to see lupus in persons who have definite signs of scrofula, or who are subject to other tuberculous diseases, is surely erroneous, and the conclusion arrived at appears to us a curiously lame one, viz.: “that lupus has a certain clinical relation to caseous or tubercular disease of the cervical lymphatic glands independent of its histology and of the presence of a bacillus; but that (apart from the latter important link) it has no connection with phthisis or with general tuberculosis.” Have we not the convincing statistics of Leloir, Doutrelepon, and others on the point, and have we not the sad experience of recent

events, when our hospitals were crowded with tuberculous patients, to guide us?

It is characteristic of the ultra-conservative views maintained by the author that so burning a dermatological question as the natural position of *Dermatitis herpetiformis* should be dismissed in less than a page, without reference to literature ulterior to the writings of Duhring in 1884, and with the conclusion that "there appears to be no advantage in using the vague term *Hydroa*, or that of *Herpetiform dermatitis* for this group of eruptions, which may better be included under the herpetic, vesicular, or bullous forms of *erythema*."

We regret that the space at our disposal does not permit us to dwell at length upon the many excellent qualities displayed in Dr. Pye-Smith's work as it would give us great pleasure to do. It is needless to state that the style in which it is written is clear and direct, but scholarly withal, while the historical points raised as to nomenclature and the derivation of many dermatological terms, are not only interesting but actually instructive. Incidentally his views as to the nomenclature of disease are worth quoting. "A good name," he says, "should have the following characters:—(1) It must consist of a single word. (2) It must be distinctive, and easily recognized both by the eye and the ear. (3) It must be capable of forming an adjective. (4) Less essential points are that it should be short, and, if possible, familiar, of Latin or Greek origin, or capable of easy reproduction in the former tongue, and as classical and euphonious as may be. (5) It should be unmeaning, or at least arbitrary and conventional in its application; or, if descriptive, should apply only to some obvious and constant feature of the malady. Many recognized names are bad—barbarous or misleading, ambiguous or cumbersome."

With all this we cordially agree, but further with our author we cannot proceed when he says: "But in most cases it is hopeless to alter them, and when a name is generally recognized it makes worse confusion to attempt it," for to do so would be tantamount to an admission of faint-heartedness on the part of one of the modern school of dermatology, before whom fresh woods and pastures new lie smiling for conquest. Throughout the work the clinical descriptions of the commoner, and therefore most important skin diseases are vivid, and bespeak the accurate observer as well as the conscientious recorder of

facts. The very scepticism here and there displayed is of the healthy type, the doubts expressed manifestly honest, the arguments employed strictly scientific. The attitude uncompromisingly adopted on many questions, which we have ventured to characterize as ultra-conservative, is in itself of value, not only as testifying to the strong individuality of the writer and of his work, but also as calculated to evoke criticism and stimulate the candid reader to reconsider many points upon which he may have made up his mind without adequate evidence, under the stimulating influence of some progressive thought-wave. Dr. Pye-Smith's book will long hold a prominent place in British Dermatological Literature.

J. J. PRINGLE.

DISEASES OF THE SKIN.*

DR. JACKSON'S work under consideration presents many salient points of contrast to that of Dr. Pye-Smith, for it is intensely modern, in the sense that almost all the recent views upon dermatological subjects are incorporated in the text, and presumably embraced by the author without question or investigation. This criticism is in accordance with the preface, in which the author says, "the following pages are intended to present the art of dermatology as it now exists. No attempt has been made to discuss debatable questions." The value of the book is thereby greatly diminished, as the opinions upon debatable questions of a dermatologist, known so favourably to us on this side of the Atlantic by his many valuable contributions to the branch of science we cultivate, would be one of our chief incentives to consult his work. Indeed, by adopting this line of treatment, the author has reduced his book to the level of a mere epitome or compendium; let us hasten to add, however, that of such it is a good example, and one which may be consulted with advantage on almost any dermatological subject. The object of the work apparently is that of a book of ready reference to the busy general practitioner; hence, pathology and etiology receive but scant notice throughout, while symptomatology, diagnosis, and especially treatment, are fully considered.

The alphabetical arrangement of cutaneous diseases has been

* *The Ready-Reference Handbook of Diseases of the Skin.* By George Thomas Jackson, M.D., etc. (Lea Brothers & Co., Philadelphia), 1892, pp. 558.

adopted. We have little hesitation in pronouncing this a short-sighted and scientifically retrograde step, for the knowledge of the mere name of a disease is of comparatively little importance as compared with the recognition of its nature, etiology, and clinical affinities, which would result from an attempt, however imperfect, to classify dermatoses into natural groups founded upon a full consideration of etiology, anatomy, clinical characters and course. Moreover, a good index would practically meet the case of the busy practitioner equally well.

A special point is also made of a large number of titles from foreign languages, with their pronunciation appended. Many a page is nearly filled up with these foreign synonyms, which include such words or periphrases as Bouton, Cutis tensa chronica, Calvez, Chorionitis, Diabétides, Ecdermoptosis, Erbgrind, Greisenhaftigkeit der Kinder, Kleienflichti, Nodosités non-erythemateuses des Arthritiques *e tutti quanti*. To us this seems a useless waste of space, for either one knows a foreign language or one does not. In the former case, to give the mere name of a disease—not to mention its pronunciation—is unnecessary, while in the latter case both are simply and utterly valueless. Many of these names to boot are misspelt; we quote at random Algidite, Dartré farineuses, Pruritus cutaneous, Erythéma, Herpes imbrique.

The introductory chapters on anatomy and general diagnosis present nothing of moment, but that on therapeutic notes is notable as containing remarks upon a number of recently introduced drugs, with regard to the value of which the author is careful not to commit himself. We note, *passim*, that he expresses no personal opinion upon the utility even of such widely recommended drugs as ichthyol and resorcin, while he has found aristol inferior to older remedies in the treatment of ulcers, and creolin "very irritating to some skins."

Dr. Jackson's dermatological "Don'ts," reprinted from the *Medical Record*, are well known, but, although they contain some valuable practical hints, they do not appeal to us. Their number, like the paradoxical *bon mot à la mode*, could easily be greatly increased without much mental exertion.

From what has already been said it will be clear that the real subject-matter of the book can offer but little scope for criticism; in almost every case it is well up to date, and facts are, for the most

part, stated with a due sense of their relative importance, the author's indebtedness to Dr. Crocker being, in many instances, very obvious and duly acknowledged. It is interesting, however, to note that Dr. Savill's cases of Epidemic dermatitis appear to the author to have been examples of Exfoliative dermatitis, with the contagious nature of which he is familiar. In discussing this latter disease he differs from Brocq, in considering that it may occur in two forms—viz., a primary and a secondary—nor does he follow that writer in his elaborate description of various sub-varieties.

It is only natural that Dermatitis herpetiformis should receive due attention, but Impetigo herpetiformis is not included in the group in which most recent writers seem inclined to include it.

The author's views on the real nature of the various forms of eczema cannot be gathered from his article on that subject, which is altogether nerveless and unsatisfactory. He apparently considers "Atropho-neurosis"—whatever that may be—as the cause of many cases, while he describes as "varieties" of the disease E. erythematosum, E. papulosum, E. vesiculosum, E. pustulosum, and E. squamosum, which ought to be regarded as merely phases of one and the same pathological process. The therapeutics of eczema is, however, fully discussed, and many valuable hints for its management are included. Indeed, throughout the book the remarks on treatment are generally excellent, the only difficulty arising from the *embarras de richesses* of the measures recommended.

Eczema seborrhoicum is described as a separate malady, Unna's original views upon it and its treatment being stated without criticism or qualification.

Further notice seems unnecessary, the author having imposed upon himself shackles which have prevented him from doing justice either to his subject or to himself. Useful, we trust, the book will prove to the practitioner, for whom it is directly intended, but it has no scientific value, and, while containing no additions to our present knowledge, is devoid of suggestiveness for its extension.

J. J. PRINGLE.

CURRENT LITERATURE.

ALOPECIA AREATA AND TRICHORRHEXIS. Dr. A. BLASCHKO, Berlin.
(A paper read before the Berlin Dermatological Society, March 8, 1891.)

SOME years ago the characteristic signs of alopecia areata, besides the pathognomonic one of loss of hair in circumscribed patches, were of a negative kind, viz., absence of inflammation, of scar formation and of hair-fracture. Microscopically the hair did not differ from that which comes out in the ordinary course of nature. Michelson was one of the first to draw attention to the brittleness and splitting of the hair, but these points were regarded as exceptional. More recently Behrend and Besnier described the presence of air and the absence of medulla in the root of the affected hair, and stated that such a condition was frequently seen in cases of alopecia. Besnier distinguishes a variety "*pelade à cheveux fragiles*" (*fausse pelade of Bazin and pelade pseudo-tondante of Lailier*) where the hair breaks off quite close to the level of the scalp.

Bazin and Lailier erroneously attribute the affection to the presence of trichophyton. Lastly, Nimier has recorded an epidemic disease of the hair, similar to the one described by the above-mentioned authors, occurring in the French army. He calls it "*folliculite tonsurante (microbienne) du cuir chevelu.*" Vaillard and Vincent have shown the disease to be parasitic and contagious by cultivation and inoculation experiments.

Blaschko states that in 75 per cent. of cases of alopecia areata he has observed in the periphery of the patches more or less numerous short broken hairs. In fact he is inclined to the view that they are always present if carefully looked for. He mentions a patient where at the outset trichorrhexis was the most striking feature. The stumpy hairs were innumerable, and the scalp looked as if it had been irregularly shorn. They afterwards fell out, and a typical case of area was the result. The affected hair shows a normal root, the shaft is atrophied and free from pigment except just before the seat of fracture, where it usually persists. The end of the shaft is either club-shaped, or perhaps more frequently hafted like a camel's hair-brush. The stumps that are oldest are perfectly loose within the follicle, and come out with the slightest traction. Sometimes a greenstick fracture of the hair is observed, and presenting the appearance of two besoms thrust into one another, resembling trichorrhexis nodosa.

Dr. Blaschko then discusses the causation of the brittleness. He does not accept the theory of hair desiccation mentioned by Behrend and Besnier due to circulatory disturbances. He refers to a simple experiment of drying hair on a hot plate, and the inability to break the hair after such treatment. Moreover, hair is hygroscopic, and it soon recovers the moisture it has lost in the process. He considers the cause to be a biochemical one, intimately connected with its nutrition and growth, and that the loss of moisture alone is insufficient to account for the brittleness and subsequent loss of the hair.

Numerous micro-organisms are found clinging to, and in, the shafts, but only in the intra-follicular portion when the stump is loose. [Dr. Blaschko says that Gram's method is misleading in demonstrating the presence of micro-organisms in epidermal structures on account of the particles of kerato-hyaline which even to the practised observer strongly resemble cocci and bacilli. He demonstrated their presence by carbolic methyl blue, decolourizing in a very dilute solution of acetic acid, and then successively dehydrating with alcohol, clarifying with oil of cloves and mounting in Canada balsam.] In those stumps that were firmer, and therefore of more recent origin, no organisms were found either in the root-sheath or hair bulb. Cultivation experiments with recent stumps on agar-plates succeeded when the fracture end was streaked along the medium, but failed when the bulb was inserted.

It is at present impossible to say what rôle micro-organisms play in the production of alopecia areata. Dr. Blaschko thinks that it is only when the hair is already diseased that they can effect an entrance to the substance, and once having found a suitable nidus spread down along the root sheath to the bulb. In conclusion he sums up:—

1.—Trichorrhæxis is a very frequent if not constant initial sign of alopecia areata; in some cases it is particularly well marked.

2.—There is no need to regard its presence as determining a special variety of alopecia areata as Besnier does (*pelade à cheveux fragiles*).

3.—The true cause of this brittleness and of its varying frequency in extent is at present unknown; the possibility of microbic influence cannot be excluded.

4.—The affection is not parasitic or contagious, and consequently differs from the pseudo-pelade of Paillard and Vincent.

FRANK H. BARENDT.

A CASE OF DERMATITIS VESICULOSA NEUROTRAUMATICA OF THE FOREARM. LOUIS A. DUHRING, M.D. (*International Medical Magazine*, March, 1892.)

Dr. DUHRING relates a case of this disease in a single woman twenty-nine years of age. There was a previous history of various neurotic symptoms, extending over three years. She was burned with a flat iron eighteen months previously, on the flexor surface of the left forearm just above the wrist. The lesion was a superficial one, and only slightly blistered. It did not, however, heal very well, but broke down anew about a month after the accident and showed a superficial slough. About six weeks after the accident, the wound having nearly healed, an eruption in the form of a single papulo-vesicle or "pimple" appeared on the extensor surface of the arm. In a week or so this eruption crusted, and other crops of similar papulo-vesicles appeared in the same neighbourhood: some healed while new ones formed, all leaving scars, as they passed away. Local treatment and arsenic internally were prescribed, without much result. In January, 1891, the lower half of the forearm was involved and encircled by the disease. The lesions consisted of small, bead-sized, irregularly-shaped, ill-defined, chronically inflamed vesicles and bullæ, herpetic-looking, more or less crusted, with scars extending considerably beyond the inflamed skin. The patch was irritable, sore to the touch and painful, while the whole extremity up to the shoulder was likewise the seat of darting pain. The process has continued in much the same

condition up to the present date. Concerning the pathology of the disease, Dr. Duhring believes the process to be a mild form of neuritis of a peculiar kind, having its origin in the burn, from which it extended, involving collateral as well as the originally affected nerve trunk. It was questionable, however, whether the symptoms could be construed as indicative of a central or reflex nature. The latter explanation has been put forth by Kaposi, Doutrelepont, and others, for a series of similar though not identical cases.

A case described by Dr. J. H. Galton, under the name "Traumatic Neurosal Pemphigus," is given at some length, which occurred in a girl of seventeen after chopping off the extremities of two fingers. In this girl, shortly after the accident, blebs appeared on the left wrist, hand, and arm. About a month later similar lesions came on the left leg. This case was considered to be due to reflex irritation, because of the disseminated distribution of its effects, and the occurrence of the disease on the leg of the same side.

Cases are then briefly recorded of a somewhat similar nature, namely, by Erasmus Wilson, Ehrmann, Kaposi of Vienna, Montgomery of San Francisco, Kopp of Munich, Routier of Paris, Doutrelepont of Bonn. In all of these cases there existed a positive neurotic pathology. The most interesting point is whether they are reflex or not in their nature. In Duhring's own case, he does not consider there was sufficient ground for regarding the affection as reflex: the symptoms were explicable by local pathology.

W. KNOWSLEY SIBLEY.

ON HEBRA'S PRURIGO. Dr. EDWARD EHLERS. (*Nordiskt Medicinskt Arkiv.*, 1892, Nr. 24.)

AFTER briefly reviewing the leading characteristics of this disease, the author gives the results of 207 cases which he has collected, and he finds that it is twice as common in males as females (187 to 70). The age of the patient at the commencement of the disease varied from a few days after birth to 29 years, the mean being 5½ years, thus agreeing with Hebra.

With regard to the time of year when the disease is most intense, the writer differs from Hebra, as he finds it is most marked during the summer, especially during August, and he believes it to be found with the same *relative* frequency in all classes of society, though *actually* more common amongst the poorer classes.

Several cases are noted in which the disease has occurred in various members of a family, and the author is led to believe that heredity plays an important part in the causation. He does not agree with Hebra in considering these cases incurable, and believes that after puberty the symptoms gradually lessen in intensity, especially with improved hygienic surroundings.

With regard to the question as to whether the papules are primary or secondary, he agrees with the younger Hebra in considering them to be secondary, and those cases described as following on diphtheria, scarlatina, etc., he considers are accidental and in no way caused by them.

As to treatment, baths are considered absolutely essential; in the summer, sea-bathing, at other times, regular daily baths of from half an hour to an hour's duration, followed by rubbing on the application of a 10% Naphthol β ointment. The treatment should, in all cases, be continued for several months after the disappearance of the symptoms.

H. W. MARETT TIMS.

RODENT ULCER. HENRY VIVIAN DANGERFIELD. (*Thèse de Montpellier*, 1892.)

THIS monograph opens with a historical review of the writings and opinions of various authorities, after which the author proceeds to give the notes of nine cases.

In speaking of the ætiology, which is still very obscure, he discusses the possibility of the existence of specific micro-organisms, probably coccidia, but advances nothing as to their nature or probable mode of action. Several cases are collected, showing that the great proportion of cases attack the upper two-thirds of the face.

Three histological varieties are recognized, the tubular, acinous, and mixed; these are described and the different views with regard to their pathological anatomy considered.

The concluding sections deal with the diagnosis, prognosis and treatment of this affection.

It is more of an epitome of the present state of our knowledge than of the advancement of any new views or facts.

H. W. MARETT TIMS.

MORPHÆA WITH MACULÆ ATROPHICÆ. LOUIS A. DUHRING, M.D.
(*American Journal of Medical Sciences*, November, 1892.)

THIS is an interesting case, showing an unusual phase of a somewhat rare disease.

The patient, a female, æt. 55, presented a variety of lesions which had existed for a year and a half, and were gradually spreading. There was no obvious causative agent.

On the back of the neck, at the margin of the hair, was a sharply-defined whitish patch of skin, measuring about two inches in diameter, the normal structure of the skin being changed into a pale, lardaceous, soft, and freely moveable patch, without any increase of thickness, and not surrounded by a hyperæmic zone or injected veins. The hair growing from the patch was of normal colour.

Near to this, on the back of the neck, disseminated on either side of the middle line, with no special arrangement or distribution, were several rounded, sharply-defined, slightly depressed, whitish, atrophic maculæ.

On the flexor surfaces of the wrists were two large symmetrical atrophic patches, raised and indurated, with a papular border, and of a brownish-red colour, the centre somewhat depressed and the skin thinned, with enlarged and purplish veins running over them. On the flexor surface of one forearm were small patches similar to those on the neck, with a linear arrangement, running up towards the elbow. There was no pain or inconvenience beyond the disfigurement. The author considers these lesions not as stages of one process but as distinct forms of cutaneous change, beginning and running their course as such; and that they illustrate the close pathological relationship between the maculæ et striæ atrophicæ and the common plaque of morphæa, which he classifies amongst the atrophies, and not with the hypertrophies.

The treatment adopted in the present case was local inunction with stimulating ointments and oils with massage, electricity and friction.

H. W. MARETT TIMS.

THE BRITISH JOURNAL OF DERMATOLOGY.

JULY, 1893.

MORVAN'S DISEASE.*

WITH NOTES OF A CASE.

BY J. HOGARTH PRINGLE, M.B. (EDIN.), F.R.C.S. (ENG.),

Assistant-Surgeon to the Royal Infirmary, Glasgow.

IN 1883 M. Morvan published his first account of the disease which at present bears his name. Since then numerous examples have been recorded by himself and others, all the cases, I believe, having occurred in France, Germany and Russia. And there has been much discussion as to what the true nature of the condition is.

In his first paper Morvan† sums up the characteristics of the disease as being, "Paresis with analgesia of the superior extremities, at first limited to one side, passing then to the opposite side, ending always in the production of one or more whitlows." Further experience has shown that all these symptoms may not be met with, and that they may be present in very varying degree.

The onset of the disease is gradual. In some cases whitlows have been the first symptom. Sometimes these have been preceded by neuralgic crises in the limbs; in others analgesia has been present, and attention drawn to the cases from the fact of the patients repeatedly burning themselves. The paresis is accompanied by atrophy, which attacks the muscles of the thenar and hypothenar

* Read before the Glasgow Medico-Chirurgical Society, April 7, 1893.

† Morvan, *Gazette Hebdomadaire*, 1883, p. 580, &c. (further papers, *Gazette Hebdom.*, 1883-89).

eminences, the interossei and muscles of the forearm; very rarely the lower extremity. The paresis was present in all Morvan's first cases, but since then he* and others† have reported cases from which it was absent.

The analgesia is usually accompanied by anæsthesia, but in 1889 he wrote that the analgesia occurs in varying degrees, and that the anæsthesia might be complete, partial, or there might be none at all. There is loss of the sense of heat.

The whitlows, as a rule, are painless; but in one of his first cases the patient suffered from two within a period of two months; one was painful, while the other was not; and other cases have been recorded in which all the whitlows were painful. They are followed by rapid necrosis of the phalanges, and lead to great mutilation of the hand.

Fissures are frequently seen in the palm of the hand, which may proceed till they involve the tendon sheaths. Vesicles have been seen on the fingers, and a violet colouration of the skin, chiefly on the affected parts. In one of Morvan's cases a fracture of both bones of the forearm was caused by the slight muscular effort required in cutting up vegetables.

In 1885 Broca‡ pointed out that scoliosis may be present, and in 1887 Morvan reported that he had re-examined twelve of his old cases (all that he could collect together), and found scoliosis present in six of them; he attributed it to a trophic lesion of the vertebræ, and classed it with the whitlows. In several cases affections of the joints have been observed, resembling those seen in Locomotor Ataxia: in a case recorded by Prouff§ there was hydrarthrosis of the right shoulder joint. In Morvan's sixteenth case, in addition to the other symptoms, the patient had a dislocation of the right shoulder, and there was some rugosity of the head of the humerus; the dislocation could be easily reduced, but the bone came out again at once. He re-examined four of his old cases, and found in two of them a dislocation of the shoulder, one complete, the other partial; both were easily reducible, but the head of the bone would not remain in place.

* Morvan, *Gazette Hebdom.*, 1886, p. 521, &c.

† Guelliot, *Gazette Hebdom.*, 1883, p. 662.

‡ Broca, *Annales de Dermatologie*, 1885, and *Gazette Hebdom.*, 1888.

§ Prouff, *Gazette Hebdom.*, 1887, p. 249.

In one of these there were large osteophytes on the scapula. In all these cases the reflexes were present, and there were no symptoms of Locomotor Ataxia.

The temperature is lowered, and the secretion of sweat is sometimes increased over the affected area.

The tendon reflexes are variable, sometimes increased, sometimes diminished or abolished.

The disease is said to affect males rather than females in the proportion of 30 to 20, and to begin in early adult life.

The course is essentially chronic, lasting for years. In Prouff's case the patient was fifty-six years old when seen, and had had seven of her fingers affected by whitlows, all of them painful, the first of which appeared at the age of twelve, so that the disease had lasted forty-four years.

In his first paper Morvan located the disease in the cervical part of the cord, but had no post-mortem examination.

The first observation as to the pathology was published by Monod and Reboul* in 1888. In their case a finger which had been amputated on account of disorganization after a whitlow was examined by Gombault, who found well-marked neuritis—"great thickening of the fibrous lamellæ, the nerve fibres destroyed, and no trace of myeline"—he stained sections by Ehrlich's method, but found no leprous cells or bacilli. They therefore attributed the disease to a peripheral neuritis, and drew attention to the fact that nearly all the patients observed up to that time were living near the sea, and state that "in this respect it approaches leprosy."

Roth,† of Moscow, arguing from a clinical standpoint, concluded that Morvan's Disease was not a separate disease, but only a phase of syringomyelia.

The first complete post-mortem examination was made by Gombault‡ in 1889 on Prouff's patient. He found diffuse sclerosis of the peripheral nerves and a sclerosis of the posterior columns and horns of the cord at the cervical enlargement, the central canal distended and filled with small cells, and at certain sections a cavity in the position of the posterior horn. Gombault did not consider this a

* Monod and Reboul, *Archives Générales de Méd.*, 1888, vol. ii, p. 28.

† Roth, *Archives de Neurologie*, 1887-88.

‡ Gombault, *Gazette Hebdo.*, 1889, p. 308, &c.

syringomyelic cavity, but thought it was produced by injury inflicted on the cord in removing it owing to the spinal curvatures. However, in 1890, Joffroy,* of the Salpêtrière, in a typical case of Morvan's Disease, found a distinct cavity in the spinal cord extending from the lower limit of the medulla to the mid-dorsal region, and a neuritis of the median and radial nerves; and in 1891 he had another post-mortem confirming this observation.

Charcot, who at first seems to have looked on the two as distinct diseases, now considers Morvan's Disease to be syringomyelia in a modified form, and calls it "Syringomyelia—type Morvan," and numerous other writers have followed Roth in taking this view. Morvan, however, still holds out that they are distinct, arguing that whitlows are almost unknown in syringomyelia, and that in syringomyelia tactile sensation is preserved, while the other forms are lost, and that in Morvan's Disease all forms are lost. Déjérine and Tulaud regarded diminution of the field of vision as an important sign of syringomyelia. Morvan examined eight of his cases, and found it present on one side in three of them.

Many observers seem to have been struck with the resemblance between Morvan's Disease and anæsthetic leprosy; but the subject was not really discussed until Charcot† took up the differential diagnosis in a clinical lecture published in 1890; he was, however, only able to give two points of distinction, viz. (1) that in leprosy there is a history of the patient's residence in a country where that disease is prevalent, and (2) the presence of leprosy plaques in the skin.

In the same year Thibierge‡ published an interesting paper on the "Cutaneous Alterations in Syringomyelia." According to him, vesicles, pemphigoid bullæ, and chronic ulcerations are what have been met with (just what are seen in anæsthetic leprosy), and in discussing the diagnosis between the two diseases he lays stress on the fact that in leprosy all the modes of sensation are lost together, in contradistinction to syringomyelia, where tactile sensation is preserved.

Jacquet has published, in the "International Atlas of Rare Skin Diseases" (pt. vi. pl. 18), the portrait of a patient to illustrate some

* Joffroy and Achard, *Arch. de Méd. Expér.*, 1890, p. 540.

† Charcot, *Progrès Médical*, 1890, vol. ii, p. 208.

‡ Thibierge, *Annales de Dermatol. et Syph.*, 1890.

of the changes in syringomyelia. There were chronic superficial ulcerations and atrophic patches of skin over the neck and side of the head. All the modes of sensation were lost, but there had been no whitlows. The patient had previously resided for some time in Algeria. Post-mortem, a cavity was found extending from one end of the spinal cord to the other, most marked in the cervical enlargement; the nerves were normal.

In March, 1891, Thibierge* showed in Paris a case of anæsthetic leprosy with sensory disturbances resembling those of syringomyelia. There was considerable doubt whether the case was one of leprosy or syringomyelia; but it was decided to be leprosy, and in this opinion Charcot concurred (I have not had access to the report of this case, and quote the above from a review on the subject by Verchère).

A month later Zambaco Pacha, who has had large experience in leprosy in Eastern Europe, wrote in the *Gazette Hebdomadaire* that Morvan's Disease and syringomyelia "are only anæsthetic leprosy modified by civilization, climate, and, above all, hygienic conditions;" that in the majority of cases of anæsthetic leprosy which he had seen the plaques were absent, and continues: "I affirm that syringomyelia as well as Morvan's Disease would have been called leprosy by every medical man having experience in recognizing leprosy." This letter was replied to by Thibierge, who, however, could not admit that the identity of the two affections was proved, and at this stage the matter still remains.

For the last eighteen months I have had under observation a case fairly typical of Morvan's Disease. The patient, who is a small, delicate-looking woman, was first seen at the Surgical Out-patient Department of the Glasgow Royal Infirmary on October 7th, 1891, on which date I made the following notes:—

Mrs. K., æt. 23, is one of a family of ten, of whom only two others are alive. The cause of death of the remaining seven is unknown to her. Her father died at the age of sixty-six, but she is not aware of what he died.

Her mother is alive and well.

She has always had good health.

She was married at the age of nineteen, and has had two children.

* Thibierge, *Soc. Méd. des Hôp.*, 1891.

The youngest is two years old. She has had no miscarriages. There is no history of syphilis.

Eight years ago she scalded her left hand and arm at her employment, in a confectioner's work, and a year later burnt her left hand over the flexor aspect of the fingers. She has never at any time had any feeling of numbness of the fingers, toes, nose, or ears. Two years later, without any apparent cause, the middle finger of the left hand became inflamed over the distal phalanx. She suffered great pain until an abscess burst; the finger was disorganized, and was amputated in one of the wards of the Royal Infirmary. The wound healed without trouble. About this time she noticed she had lost the sense of heat and of touch in the left hand.

Four months previous to the birth of the last child (two years before I saw her) the left ring-finger was affected in a similar manner. The distal phalanx necrosed and was removed. The night following the birth of the child the left little finger became swollen and painful; the swelling extended into the palm, along the tendon sheath, where it was incised; later the phalanx necrosed, and the soft parts sloughed.

Three months ago she cut the left index-finger over the first interphalangeal joint. The wound remained unhealed for two months, but no inflammation showed in it till shortly before she came to the Infirmary. She attributes these affections of the fingers to the burns. When seen, the left hand presented the following appearance:—The left middle finger was gone; the distal phalanx of the ring, and the last two phalanges of the little finger were also gone; the left index-finger was slightly flexed and swollen, the skin thickened and red, a sloughy ulcer was present over the dorsum of the first interphalangeal articulation, through which the base of the second phalanx presented, but which was not yet loose.

On testing her sensation, it was found that the sense of touch was lost over the palmar aspect of the left hand and fingers, and defective over the dorsal. Painful sensations were felt all over.

Heat up to 212° F. and cold were never distinguished at any point below the fold of the elbow, nor over the outer and posterior aspect of the left arm. Along the inner and anterior aspect of the arm she called 212° F. "warm," but temperatures a little below that she could not distinguish from cold.

On the right upper extremity she could not tell when heat (212° F.) or cold was applied to the skin below the elbow, though she always knew when she was touched. Above the elbow she called 212° "luke-warm." There was no affection of sensation to touch, pain, or heat over the head, neck, trunk, or lower limbs.

She does not sweat much at any time, and has noticed nothing about the secretion on the arms.

There is considerable atrophy of the muscles of the thenar and hypothenar eminences.

There is well-marked scoliosis, the chief curve being in the lower dorsal region, with slight compensatory curves in the lumbar and cervical regions.

There is no paralysis of the facial or tongue muscles, and no strabismus, but there is rotatory nystagmus in both eyes. The left arm is weaker than the right; the power of the lower extremities is equal.

The knee-jerks are equal, but a little exaggerated. There is no ankle clonus, and the plantar reflexes are absent.

The pupils react normally. The vesical and rectal reflexes are normal.

Vision is good. The fundi are natural in appearance. Sense of smell very defective, but she states this has always been so.

The sense of taste seemed to be deficient on the left side of the tongue (but, as this has not been found on any subsequent occasion, one cannot attach much importance to the observation).

There is a small ulcer at the back of the left elbow, situated on a dusky red elevated base, in extent equal to about the size of a florin. Several cicatrices over the left forearm, the results of burns. There are three small dirty, yellowish-white patches on the skin at the back of the neck on the left side, the surrounding skin being of a darker colour.

The patient was seen frequently up to the end of December 1891, and her condition as often examined, always with the same result. The dead bone in the left index-finger separated, and the finger healed.

She was not seen again for about two months. On February 9th, 1892, I went over all the symptoms again, and found that the anæsthesia had quite gone from the left hand, and she referred all the places touched correctly; but over the left side of the neck, along the

distribution of the anterior cervical cutaneous nerves, there was anæsthesia, though she could feel the prick of a quill-pen. Testing the heat-sense in the arms gave the same result as formerly, but over the anæsthetic area of the neck and posterior aspect of the auricle she cannot distinguish between heat and cold, but does so at once over the left cheek and right side of the face and neck. There are now many more of the whitish patches in the skin at the back and side of the neck on the left side, extending up to the margin of the hairy scalp. Many of these are larger than the original ones; some are cicatricial, others are not; some are analgesic, while the periphery of some is hyperæsthetic. There are, in addition, two ulcers close to the margin of the hair with thickened red edges and shiny glazed bases. There is another small ulcer on an infiltrated skin area in front of the second left rib, two inches from the border of the sternum. The ulcer at the elbow is still unhealed.

The left ulnar nerve at the back of the elbow is distinctly thickened as compared with the right. Fibrillary twitchings are well marked in the left upper extremity.

I was anxious to excise some of the ulcerated portion of skin, but the patient declined.

August 29th, 1892.—She has not been seen since February. In May last was confined, but the labour was not attended by any increase in the symptoms.

The sensory phenomena remain as before. The patches in the skin of the neck have become still more numerous.

The sense of taste is natural.

The Sense of Smell.—She cannot recognize aromatics, but does pungent substances.

She constantly, almost every day, burns the left hand and forearm, and does not know until she sees the results. She thinks she is much worse, cannot now walk any distance, and is unable to grasp any object in the left hand.

November 12th.—I found the sense of touch was lost over both aspects of the left hand and lower third of the forearm anteriorly, and that there was analgesia over the dorsum of the left hand. The anæsthesia of the neck extended all over the distribution of the cervical nerves in front and behind, and down to the level of the second intercostal nerve—limited to the left side. Many of the patches

in the skin remain analgesic, but the surrounding skin feels the prick of a quill-pen. There is a dusky, slightly elevated patch of skin over the dorsum of the left hand, measuring $1\frac{1}{4}$ by 1 in.

The heat-sense remains as before. Sensation is natural over the lower extremities.

The knee-jerks are much exaggerated. Ankle clonus is now present on both sides. Vesical and rectal reflexes are normal.

Her voice has become hoarse, but no change could be seen by the laryngoscope.

She says that about six months ago some small vesicles came out in crops in the neighbourhood of the left wrist.

April 4th, 1893.—The sensory changes remain as mentioned in last note, except that the anæsthesia has extended rather further up the anterior aspect of the left forearm.

On the right forearm posteriorly is still unable to recognize heat or cold, but anteriorly calls 212° F. "warm," though the conduction is much delayed.

On the lower extremities the heat-sense is now decidedly defective over the inner aspect of the feet and legs.

The fields of vision are both contracted, specially the right. Vision: R = $\frac{6}{8}$; left, $\frac{6}{8}$.

During cold weather she suffers very severe pain in left arm, which radiates from the finger to the shoulder.

Otherwise she remains much as before.

Remarks.—The symptoms exhibited by this patient correspond fairly closely with those associated with Morvan's Disease. One peculiarity is the fluctuation in the sensory disturbances; on some occasions the anæsthesia and analgesia have been wanting, and on others well marked. This may possibly be due to some variation in the tension in the cavities in the cord.

I think there can be no doubt that the condition of syringomyelia underlies the disease described by Morvan. It has been found distinctly in two of the three post-mortem examinations obtained up to this time, and although Gombault did not consider his to be a case of syringomyelia, it has been accepted by others as such: it at least bears a close resemblance to that condition, and may well have been a case of gliomatosis of the cord, which is intimately related to syringomyelia. Although Morvan still protests against the idea of

the two affections being one and the same thing, his arguments do not hold good, for whitlows are sometimes, though rarely, met with in syringomyelia (they have been described by Roth, Bruhl, Schultze), and he himself has recorded cases of Morvan's Disease where the tactile sense was not lost, and one case where whitlows were absent.

The scoliosis which Morvan attributes to a trophic lesion of the vertebræ is, I think, more probably due to a weakness of the spinal muscles, due to the central disease : it has also been seen in cases of pure syringomyelia.

But although the syringomyelic condition of the cord has been found in these cases of Morvan's Disease, the fact of the peripheral neuritis being present must not be forgotten. It may be to this that some of the special features of the disease owe their origin.

The question as to the relation between Morvan's Disease and anæsthetic leprosy is a more difficult one. From the combination of the destructive changes in the fingers, the sensory and cutaneous alterations, and the thickening of the ulnar nerve, the picture presented by Mrs. K. seems to me very like that of anæsthetic leprosy. Last August the discharge from some of the ulcers was examined for leprosy bacilli, but none were found ; and in December last a small ulcer was excised from the back of the left elbow, and numerous sections have been examined, but no bacilli found. Gombault also failed to find them in sections of the finger from Monod's case. Till recently it had been supposed that in anæsthetic leprosy bacilli were only found in the nerves, but in the *Virchow Festschrift*, vol. iii, p. 63, Hansen writes that he and Dr. Soot have found them in the macules, and on p. 64 writes : "Bacilli are found in all affections in the two forms." So that at present the identity of Morvan's Disease and anæsthetic leprosy is not proven.

THE BHAU DAJI TREATMENT OF LEPROSY.

BY STANLEY BOYD, M.B., F.R.C.S.,

Surgeon to Charing Cross Hospital.

THE above title will probably convey little meaning even to dermatologists, yet it will be understood by all who were practising in the Bombay Presidency between the years 1868 and 1872. Mr. Bhau Daji was a graduate of the Grant Medical College, Bombay. I am informed that one of his teachers, the well-known Dr. C. Morehead, suggested to him that he should study the treatment of leprosy. Accordingly Bhau Daji began a series of careful observations upon the various remedies which had a reputation among the natives for the relief of leprosy. He commenced work upon the subject before 1859, when Dr. Morehead left India, and, in 1862, I find a note of his having stated to Dr. Duff, of Calcutta, that he was trying a remedy in his "charitable dispensary at Bombay which offered a hope even for lepers."

About 1868 letters from people who believed that they had been cured of leprosy by Bhau Daji began to appear in the Indian newspapers, and occasional articles in the *Times of India* show that there was a good deal of acrimonious discussion going on upon the subject of these "cures," and upon the propriety of Bhau Daji's action in keeping secret his method of treatment. Naturally medical men were very sceptical as to the reality of the cures, and the *Lancet*, 1868, vol. ii., p. 238—in the same volume which recorded Dr. Bakewell's report upon Beauperthuy's cases—stated that, among the seventy cases of relief or cure with which the Bhau Daji treatment was at that time credited, not one cure had been fairly proved, and expressed the opinion that the mode of treatment should be made known.

Bhau Daji, however, made up his mind that the value of his remedy should be proved beyond a possibility of cavil before he made

it public property, and the testing of a remedy for a chronic disease like leprosy would evidently require some years. He accordingly raised funds and established a hospital and dispensary for lepers. Here accurate records, in the shape of notes, photographs, and drawings of the cases under treatment were kept. Whilst engaged in this work, in January, 1873, he had an attack of apoplexy, from which he never recovered sufficiently to be able to work. He died on May 30th, 1874, and it was generally believed that his secret had perished with him.

I have been credibly assured that up to the time of Bhau Daji's death his own brother, Narayen Daji, did not know the name of the remedy. But, probably fearing that the value of his work might be lost, Bhau Daji had told it to three European friends, in confidence. This condition all felt to be binding, until one of them, a Civil Servant of high position, after inquiring from Bhau's executors and children whether they had any objection to his making the remedy known, placed the matter in my hands, giving me at the time a specimen of the remedy, his original pencil notes of several cases made on September 19th, 1868, accounts of several other cases which appeared in print, copies of two statements sent by lepers to Bhau Daji, and certain letters from Bhau Daji himself. I ought to remark that the gentleman to whom I am indebted for most of my information was well qualified to make observations in such a matter. A judge by profession, and accustomed to deal with evidence of all kinds, he had recently passed through an all but complete course of study in a London medical school, and his interest in scientific matters of all kinds was well known in Bombay.

On looking through the evidence, I felt sure that it would be insufficient to convince any one, because the observations recorded were not continued long enough to prove the relief or cure permanent. I therefore used every endeavour to discover what had become of Bhau Daji's papers, photographs, etc., at his death. They are said to have passed to his brother, Narayen, who survived him only six months, but beyond this I have been unable to trace them. A short time ago, however, I was so fortunate as to discover that a boy who formed the best case of supposed cure in my collection is alive and well, earning his living as a carpenter; and I have received some valuable information concerning two other patients from Colonel Wilson, the present

Commissioner of Police in Bombay, who was so good as to inquire after them for me. With these items in hand it seemed to me that I had sufficient evidence to justify me in bringing Bhau Daji's remedy prominently forward, and in asking those who have the opportunity to give it a trial. I hope further, that some of the patients mentioned may still be traced and notes of them sent to the *British Journal of Dermatology*. In this hope I give the names and addresses of patients who wrote to the Bombay papers testifying to the value of Bhau Daji's treatment.

With regard to the nature of the remedy:—My informant told me that Bhau Daji came ultimately to rely upon one substance—the oil of the *Hydnocarpus inebrians*, known among the natives as *kauti*—which he used both for internal and external administration. Sometimes he coloured the oil to render it less easily recognizable. I have statements of the directions given by Bhau Daji to two patients—one European, the other native. From these I gather that in the early morning ʒi x—ʒss. of the oil was taken in boiled milk, and it is said to be “not bad to the taste”; then the patient was rubbed all over with the oil; after two hours the oil was washed off in a warm bath. Sometimes the oil was directed to be applied again, and kept on until evening, when the patient wiped himself and went for a walk until he perspired; in other cases no oil was applied after the warm bath until evening, when it was again rubbed in over the whole body, and the patient slept in it. The oil was applied also to affected mucous surfaces: for example, it was to be run into the nasal cavities. The patients were ordered to abstain from pork, beef, and fish; from all alcoholic drinks, tea and coffee; they were allowed as much milk, fruit, and vegetables as they liked; also butter, eggs, mutton, and fowl.

No ill effects were noted in any case which I have come across. Irritation and vesication did not result. Some patients complained that it caused a sensation of hunger. A native clergyman recorded, from observations on himself and others, that the curative effects were best marked after one and a half to two months, when the swellings subsided, redness lessened, tubercles softened, and ulcers healed. Red or greyish spots, he said, assumed a dark hue and became black, then the skin turned to the colours natural to the patient.

I will next state the cases, which seem to me to show that the

remedy deserves a careful trial. I quote the first and most important from the *Times of India*, in which journal the boy's father published more than one statement of his case. The lad was a pure European, and his photograph was taken from time to time by Messrs. Lindley Warren and a Mr. Sergeant.

CASE I.—My son, T. B. H., aged 13, was about three years ago afflicted with leprosy. His arms and hands to the tips of his fingers were much swollen and helpless. His legs, knees downwards, the ankle joints on to the toes the same. The boy was obliged to be carried up and down stairs. He could barely sustain the weight of his body on his feet, and could not wear shoes. His face, nose (nostrils nearly closed), and ears (about four times usual size) were very much swollen and greatly disfigured. He was a most pitiable sight to look at—when one day he was seen by Dr. Blaney (Apothecary of the European General Hospital, Bombay), who at once recognized the disease, and gave me a letter of introduction to Dr. Bhau Daji, who, up to this time, was in all but name a stranger to me. He took the boy in hand, and, by adhering to his instructions, I am happy to say there is a cure for the leprosy. From the poor, frightful, helpless child, unable to stand, he is now as healthy and fine a boy, and I'll back him to walk, run, or jump with any boy of his age in Bombay. He can take a standing jump of 6½ feet.

C. H.

P.S.—Dr. Sylvester's certificate appended for publication.*
Bombay, August 16th, 1872.

[Copy.]

Certifies that, at Dr. Bhau Daji's request, I have examined T. B. H., aged 13. I believe I have seen this boy on a previous occasion among Dr. Bhau's leper patients while watching their treatment. At all events, I have seen photographs of young H., taken from time to time. He was afflicted with tubercular leprosy, which affected his face, chest, thighs, and legs—in fact, it was almost general. He is stated to have been under treatment two and a half years, and is now completely cured, so far as can be discovered. The skin is soft and natural, and the boy's health is apparently sound. I believe the patient has been cured.

JOHN HENRY SYLVESTER, Professor of Medicine
Bombay, August, 1872. and Principal, Grant College.

Quite lately I succeeded in finding the father of T. B. H. He told me that his son, now aged 33, is in perfect health, working in London as a carpenter. There is absolutely no sign of leprosy left about him. The young man positively declined to see me or any doctor, but the fact that the father was able, by destroying his copies of the

* I wrote some years ago to Dr. Sylvester, but have, unfortunately, lost his reply. So far as I can recollect, it did little more than express indignation at the publication of the above certificate.

photographs above mentioned, to keep a second wife ignorant that leprosy had existed in his family shows how perfect the recovery must have been.

CASE II.—Miss J. H. Collins, of Small Colaba, aged 24, European (mother born in Bombay). She was one of three surviving children out of ten. She was vaccinated at five months, and this was followed by ulcers all over her body. Leprosy, soon after an attack of measles, began fourteen years before she came under treatment, and increased steadily. She came under Bhau Daji's care on March 20th, 1868. At this date her face and ears were greatly swollen, and she had large lumps beneath the eyes; the eyelashes were quite gone, the nose fallen in, the hands were much swollen, the legs were much swollen, the skin discoloured, and there were three ulcers on each, the largest being the size of the palm, and very painful, causing frequent loss of sleep. Sensation was lost in the feet. Attacks of fever occurred every other day or even every day, and she was very weak. On September 19 the face was much smaller, the lumps beneath the eyes almost gone, and the right eyelashes were growing again. The hands were much less swollen, and the swelling of the legs had gone, the discolouration was going, sensation in the feet was returning, all ulcers but one were healed, and this was reduced to the size of a dollar, was healing, and the pain was less. There was no fever now. She had gained strength greatly, and slept well. On January 30, 1892, Colonel Wilson reported that this patient was "alive. She gave up the medicine since Bhau Daji's death. The disease remains stationary, not cured but evidently checked." I have failed to get a medical report upon present state. She may be cured, and the trace of former ravages may have been taken as evidence of existing disease.*

CASE III.—Mrs. Cornish, European, living on the Esplanade, aged 31, was born in and had always lived in India. The disease was of nine years' standing. When she came under treatment on March 1st, 1868, she was then very weak and bedridden, the face and ears were greatly swollen, the nose fallen in, the eyebrows gone, the hands were swollen, the nails gone, sores in the legs and arms were fetid and almost unbearable; one ulcer on the left leg measured seven by four inches. Attacks of fever were frequent. On September 19 she could walk two or three miles and go about her business, the swelling of the face was much less, the eyebrows and nails were growing again (no other statement about hands), all sores, except the largest, which was nearly healed, healed in the first month of treatment. She had had only one attack of fever since the commencement of treatment. This patient stated that the relief given by the oil was experienced within the first week, and that the improvement was quite steady. Colonel Wilson could obtain no information about Mrs. C. It may be worth noting that she had a family.

CASE IV.—Mrs. Burrett, aged 18, born in Bombay of Irish parents. Disease of two years' standing. Came under treatment on June 26, 1868. She had swelling of the entire upper and lower extremities, with brown raised patches, swelling of and spots on the face, and swollen nose. Marked improvement occurred

* Col. Wilson writes, under date June 17th, 1892, that Miss C. declined to allow herself to be photographed, both she and her friends asserting that she was suffering from leucoderma and not from leprosy.

in a month : the swellings at the time of the report were entirely gone. Colonel Wilson reports : "As regards Mrs. B. she was not cured, and is dead."*

Of the following cases in natives I have no account other than the hasty pencil notes of the gentleman who gave me the name of the remedy.

CASE XVIII.—The Rev. Vishnu Bhaskur Karmarkar, of the American Mission in Ahmednuggur, wrote a careful account of his own case in the *Dhyanodaya* of September 1, 1868, from which the following is an extract : He had been ill four or five years before coming under Bhai Daji's treatment on April 1, 1868. "In two months I felt considerably better, and now, after four months, I am half cured. The shining of the skin of the whole body is gone. The swellings in different places have become less, and the veins of the hands, etc., which could not be made out before, are now seen distinctly. Most of the redness of the face is gone. The swelling of the ears still exists, but far, far less than what it was before. The hairs of the eyebrows, which had dropped off, have commenced to grow again. The feeling of improvement internally is even greater than the external improvement. The appetite is good, and the food is digested easily. I am in better spirits, and my strength is double what it was. Formerly, from ulceration in the interior of the nose, blood used to pass, and, not being able to breathe through the nose, the mouth had always to be kept open. From this, especially at night, the mouth used to be very dry, causing distress which has now gone. The ulceration in the nose still exists, but very slightly. The sense of smell, which was lost, is now mostly restored ; the voice, which had acquired a nasal twang, is now clear."

CASE XIX.—In the same paper this gentleman refers to the cases of certain other lepers under the same treatment whom he had watched, and with whom he had often spoken. Among them the following seems the most promising: Rustomjee Byramjee, compositor in the *Times of India* printing office, living at Chira Bazaar, aged 20. Had the disease during his sixteenth year. In the seventeenth year it increased considerably. Those doctors who treated him are ready to certify that he really has leprosy, and that their treatment did him no good. He had swellings in different places, the nostrils were much swollen, and there were reddish tubercles on the face and hands, neck and ears. In this state he came to Dr. Bhai Daji. The doctor was then only giving a trial to his new remedy, and thought the young man was a good patient. He got him to agree to take the medicine a long time, and to strictly observe the diet and regimen. Six months after taking medicine the disease completely disappeared. He has ceased taking medicine for 2½ years, and he has not observed the same strict diet. No one would now believe that he had had leprosy, so clean and healthy does he look.

Marked improvement is noted in all the cases mentioned.

I cannot close without saying a few words upon the fact that Bhai Daji did not publish his mode of treatment, a fact which caused it to be freely said that he concealed it for his own advantage. I do not

Col. Wilson reports further (June 17, 1892) that Mrs. B. died of dysentery ; but that the disease was then far advanced owing, according to the statement of her husband, to persistent neglect of all treatment.

know when he began to use kauti oil as his sole remedy, but not until 1868 do we find public notice taken of his "cures." Counting this year in, he had five years (1868-72) in which he was able to work at the matter, not too long one would think, especially when the result of Koch's premature publication is remembered. It is stated in the obituary notice in the *Times of India*, June 5, 1874 (both the proprietor and editor knew Bhau Daji), that, "while ill, he was most anxious that his manuscripts should be collected and got ready for publication." Evidence is easily obtainable that in the majority of instances his leper patients were treated gratuitously, and that often he supported or assisted them during the treatment, conduct which is entirely in keeping with the generosity and public spirit for which he was remarkable. My informant knew Bhau Daji as well, probably, as a European ever knew a native, and could hardly have failed to detect, had they existed, the meanness and baseness which were attributed to him; nor is it at all likely that a native of low character would have been honoured by the friendship of Sir Bartle Frere and many of the best Europeans then resident in Bombay. Bhau Daji certainly had no need to seek honour as the vendor of a secret remedy, for there have been few men in our profession of whom more, or even so much, could have been said as we find in the obituary notice above referred to.

[The records of other cases, Nos. V. to XVII., do not appear to us sufficiently complete to be worth publishing in detail. In all of them great improvement is spoken of, and in two, almost complete recovery.—ED.]

CLINICAL NOTES.

**A REMARKABLE FORM OF URTICARIA APPEARING SHORTLY
AFTER AN ATTACK OF MEASLES.**

BY FRANK PENROSE, M.D.,

*Assistant Physician to St. George's Hospital, and to the Hospital for Sick
Children, Great Ormond Street.*

THE following case appears to be worthy of placing on record.

Bessie P., aged two years, was first seen on November 11th, 1892, at the Great Ormond Street Hospital, when the mother gave the following account:—The patient was the eldest of two children, and there had been no miscarriage. Labour was induced at eight months on account of the mother having been the subject of Bright's disease since she was "gone" about five months, and the labour was instrumental.

The child was suckled for three months, then weaned, and brought up on Nestlé's milk and Ridge's food. The child appeared to be in perfect health until about eighteen months of age, when she had measles, from which she appeared to recover completely.

Within six weeks of the onset of the disease the mother first noticed a spot on the dorsum of the right foot, which was followed by the appearance of other similar spots in the following order, viz., on the upper eyelids, the thighs, and the front and back of the trunk.

No history of any family taint of consumption, rheumatism, or other hereditary disease could be obtained, and with the exception of the spots and measles the mother stated that the child had always been in perfect health.

When first seen, the following note was made:—"Many of the patches are about the size of a sixpenny-piece; some, however, are quite small, and very like lichen urticatus." The patches are, many of them, formed by rings of small hard nodules, others of groups of small hard nodules ranged irregularly in small clusters,

Each area is red. The surface of the skin appears natural; but the nodules can be readily felt deep in the skin. The crop of eruptions had increased considerably both in size and number during the last month. The patient is a fine, well-nourished child, and in every other respect seems to be in perfect health. It had been taking no medicine whatever.

On December 14th, 1892, the child was shown at the Dermatological Society, and the general opinion expressed was that it was an unusual case of urticaria.

On December 30th the following note was made. There is no evidence of any itching, and the mother has never observed the child to scratch herself unusually.

The number of patches is increasing in size and number. Each patch begins as a small spot, and gradually spreads at the edges. None have as yet disappeared.

The epithelium from a patch on the anterior surface of the abdomen was scraped off and examined under a microscope; but no spores or mycelium could be found. The child seems in perfect health, but the spleen can just be felt below the margin of the ribs.

The next note was on March 3rd, 1893.

A number of fresh patches came out all together about fourteen days ago on the back, and the old patches were much brighter and more vivid than on any previous occasion. The mother had not noticed any change in the habits or condition of the child. Its general condition was very good. The spleen was no longer palpable.

June 14th.—The patches have almost disappeared. The child is apparently in perfect health.

The following points appear to be worthy of notice in this case.

1. That the first appearance of the eruption occurred shortly after recovery from an attack of measles.

2. The peculiar mode of extension of the eruption and the border of each patch being formed by small distinct palpable hard nodules.

3. The duration of each patch; that on the foot being still visible, though faint, ten months after its first appearance. This patch attained a larger size than any other, at its maximum covering an area the size of half-a-crown, no other patch being larger than a shilling.

TWO CASES OF DRUG ERUPTION.

BY NORMAN WALKER, M.D.,

Assistant Physician for Diseases of the Skin, Edinburgh Royal Infirmary.

Two cases of drug eruption which I have recently met with are, I think, worth putting on record.

Quinine-Urticaria.—I was asked by Dr. Argyll Robertson to see a patient in his wards who had a rash on his skin. Patient, a young man, was almost covered with urticarial wheals. His throat was sore and red and he had difficulty in swallowing. He had been taking a mixture containing a small dose of quinine, not more than two grains for two or three days. On the stoppage of the medicine the rash rapidly disappeared. An interesting fact in connection with the case was the patient's susceptibility to belladonna, which, in the form of atropine drops, invariably caused an eczema of the lips, and had consequently to be abandoned.

Morphia-Erythema, Desquamation.—One of my students sent for me to see him, as his body was covered with a rash. He had felt unwell with sore-throat for some days, and had been under the care of one of our physicians, who diagnosed his case as tonsillitis, and ordered him salicylate of soda, under which some improvement took place, and he was able to appear for an examination. The discomfort in the throat and the worry of examination prevented his sleeping, and he took on two successive nights half a grain of the acetate of morphia in the form of Burroughs and Wellcome's tablets. When I saw him he was in his sitting-room, feeling pretty well except for the intensely itching rash which covered his limbs and the lower part of the trunk. The face and the upper chest were free. The rash was diffuse, of a *dull* red colour, and did not altogether disappear on pressure. The throat was still a little red but no longer painful, and he could swallow easily. The temperature was normal. He had never had scarlet fever. This, rendered unlikely by the date of the appearance of the rash, the absence of fever, the character of the rash, and the fact that the sore-throat had existed for a week before its appearance, was practically excluded by the fact that the physician under whose care he had been—one with enormous experience in fever—had no hesitation in saying that the throat condition was simple tonsillitis. Under Pick's Linimentum Exsicicans, with a little

tar, the itching and the rash rapidly disappeared, in three or four days he felt quite well and continued his examination. About a week after the appearance of the rash desquamation commenced and spread over all the parts where the rash had been.

In this case also there was susceptibility to drugs. Some time previously the third dose of copaiba which he had occasion to take was followed by the typical rash.

THE NATURE OF THE VERNIX CASEOSA.

BY WALLACE BEATTY, M.D.,

Physician to the Adelaide Hospital, Dublin.

THROUGH Dr. J. Smyly's kindness I have had an opportunity of examining the skin of the head of a new-born infant whose scalp at birth was covered with vernix caseosa. The infant died a few minutes after birth. Osmic acid-stained sections of the skin show distinctly that the fatty covering which forms the vernix caseosa is derived from the sebaceous glands and not, as Dr. P. G. Unna holds, from the sweat-coils; as the blackened fatty layer on the surface of the skin is found on microscopic examination to be directly continuous with the blackened fat which fills the hair-follicles and sebaceous glands. Neither the lumen nor wall of the sweat-coils or ducts is blackened by the osmic acid.

EXPERIMENTAL NOTES.

BY H. LESLIE ROBERTS, M.B.,

Dermatologist to the Royal Infirmary, Liverpool.

I.

ON THE COMPARATIVE PATHOLOGY OF ECZEMA.

THE study of eczema in the lower vertebrata will help us to a better understanding of the eczema of man. The comparison of processes is not less valuable than the comparison of homologous structures in different species of animals. Both are useful, for what is obscurely or imperfectly developed in one species may be prominently developed in another.

Thus we associate, by force of habit, the appearance of papules, or vesicles, or pustules with the disease eczema. But none of these formations can with strict verity be considered essential to the disease. For croton oil—a substance capable of provoking eczema—excites an eczema of the common sort in man, but an eczema of another sort in the toad, while it is harmless to the integument of some—if not all—rabbits.

The effect of croton oil on the skin of the toad may be learnt from the following experiments :—

A one-twelfth of a grain of curara was injected under the skin of a Natterjack toad, which speedily paralyzed the voluntary muscles. The web of the left hind-foot was placed under observation, when the blood-stream was seen to be slow and the capillaries congested. It was then painted with a little croton oil, which had the effect of greatly increasing the velocity of the capillary flow. But this stimulation was purely local; it did not affect much the flow in the arterioles and venules, and had no influence on the circulation in the web of the other foot. It was not a mere evanescent stimulation, followed soon by stasis and exudation; for five and a half hours after

applying the croton oil there was capillary circulation in this web, when there was none in the other.

Another Natterjack was taken, and a little croton oil painted on one leg and thigh. For two to three hours the animal was restless, and the portion of skin which had been painted became darker. This was the only change which could be observed, for there was not so much as a trace of exudation in the shape of papules, or vesicles, or pustules. The animal died on the third day, and the autopsy showed that the muscles beneath the painted portion of skin were deeply congested. But there was no congestion of the sciatic and popliteal nerves, nor of the minute branches passing to the skin of the thigh and leg. The epidermis and dermis were infiltrated with bright refractile bodies showing the brownian movements.

Another toad was killed by chloroform five and a quarter hours after the application of croton oil. An incision into the skin of the painted thigh was followed by an escape of white fluid, which consisted, as the microscope showed, of white and red corpuscles. Thus there had been an exudation on the *inner* surface of the skin, not on the outer, as in man. *Where did this exudation come from?* From the capillaries of the dermis, as the following experiment showed. A Natterjack toad was chloroformed, and a slit made in the integument of the abdomen, through which a clean, sterilized, cover-glass was inserted, and the lips of the wound brought together and fixed by horsehair, and covered with cotton-wool and collodion. Eighteen hours later a little croton oil was painted on the circular portion of skin immediately above the cover-glass. When the animal was killed, after a few hours, the surface of the cover-glass which had been in contact with the deep surface of the dermis was covered with exudation. None of this exudation had travelled up into the tissues of the skin, which were infiltrated with bright refractile bodies. The origin of these bodies was detected by the use of an immersion lens, by which they could be traced to the red corpuscles, which in the frog are nucleated. The corpuscles divide and liberate their nuclei, which pass outwards into the cutaneous tissues. The variation of cutaneous structure in the toad will account for the variation in the eczema. The dermis on its inner surface is a sharply defined membrane, and does not merge into fatty areolar tissue, as in man. The formation and deposition of fat takes place in the upper layer of

the dermis, and this fatty zone seems to form a sort of belt to oppose the outward escape of the exudation.

The following experiment is suggestive of the influence which innervation plays in the production of eczema. A healthy guinea-pig was taken, and its right sciatic nerve divided; the lips of the wound were drawn together and secured in position by silk threads. On the second day after this operation, when the animal had recovered, a little croton oil was painted on the paralyzed leg and a little on the sound leg. It was a matter of some surprise to find that the croton oil produced no trace of eczema in the sound limb, but in the leg with the cut sciatic nerve the skin appeared red, as if an eczema were starting, though it never went beyond the hyperæmic stage.

II.

ON THE INFLUENCE OF SALICYLIC ACID AND OTHER CHEMICAL SUBSTANCES ON THE OXIDATION OF PYROGALLOL.

THE Dermatologist is sometimes blamed for the number of ingredients in his ointments. He is said not to be quite sure of his mark. This accusation is not entirely true, nor is the blame always deserved, for there often is a certain method in his apparent folly which I shall attempt to explain in this note.

Pyrogallic acid is a valuable agent in dermato-therapeutics. It acts well—apart from any theories as to its action—in chronic scaly, hyperæmic affections, such as psoriasis, and in desquamative diseases of the epidermis. As a chemical substance it belongs to the phenols, or oxybenzenes. Its close chemical relation to phenol, or carbolic acid, is seen in their respective formulæ :—



In the latter two benzene-hydrogen atoms have been replaced by two molecules of hydroxyl. It is also closely related to tannic and gallic acids, being one of the products of the decomposition of these natural substances. A remarkable affinity for oxygen is one of the most striking properties of pyrogallol, and on this property Unna has built up a theory of its beneficent action in certain skin diseases.

On the possibility of the truth of this it is useful to know how the

reducing action of pyrogallol is modified by substances, some of which are frequently combined with it in ointments. To test this modifying influence, the oxidation of the pyrogallol was allowed to proceed alone in a certain quantity of distilled water: then the process repeated precisely as before but with the addition of certain substances. The degree of oxidation is judged of roughly by the intensity of the colour and the rapidity of its production, in comparison with the colour production in distilled water. As oxidation proceeds the solution acquires a brownish-yellow tint, which deepens to dark brown.

The standard solution was

Distilled water	.	.	.	.	4.0
Pyrogallol	.	.	.	.	0.1

The pale yellow colour did not appear for 17 hours: in 36–48 hours the liquid had an orange-yellow tint.

When a fresh solution of the same strength was boiled, the orange-yellow colour appeared in a few moments.

The influence of salicylic acid was very remarkable.

Distilled water	.	.	.	.	4.0
Pyrogallol	.	.	.	.	0.1
Salicylic acid	.	.	.	.	0.1

The solution was colourless at the end of 17 hours. Even in hot water the oxidation does not proceed to any appreciable extent in the presence of salicylic acid.

Carbolic acid had a contrary effect.

Distilled water	.	.	.	.	4.0
Pyrogallol	.	.	.	.	0.2
Pure carbolic acid, gutta	.	.	.	.	1.

The colour appeared more rapidly than when the carbolic acid was absent, but in respect of this action carbolic acid differs from the *mineral and vegetable acids*, which retard or even arrest the oxidation of the pyrogallol. Alkalies, on the other hand, favour oxidation to such an extent, that the colour appears very rapidly.

Chlorate of potash was tested in a solution of the following strength:—

Distilled water	.	.	.	.	4.0
Pyrogallol	.	.	.	.	0.1
Chlorate of potash	.	.	.	.	0.1

The chlorate of potash hastened the appearance of the colour. The upper portion of the liquid was dark yellow in colour, while the deep portion was pale yellow.

A solution of pyrogallic acid is almost immediately oxidized in the presence of certain nitrogenous substances. Egg-albumin, and probably serum-albumin, has this power, and the albumin is precipitated but not coagulated as by heat. The influence of nitrogenous matter on the oxidation of pyrogallol is very beautifully illustrated when the yeast fungus is present in the solution. The torulæ form a deposit at the bottom of the liquid, and where the deposit comes in contact with the pyrogallic solution it is stained black, while the deep part remains of a grey or white colour.

III.

ON THE DIFFUSION THROUGH DEAD MEMBRANES OF IODIDE OF POTASSIUM INCORPORATED WITH OINTMENTS.

DR. ARTHUR P. LUFF wrote a short article in this Journal in June, 1890, which chronicled the results of some experiments on "The Absorption of Drugs from Ointments." His problem amounted to this: Given the same quantity of the same drug incorporated with the same quantity of different ointments, and all placed under precisely the same conditions for osmosis, what influence has the ointment upon the osmosis in respect of the rate of osmosis? The drugs tested in respect of this were iodide of potassium, carbolic acid, and resorcin: the conditions were diffusion through a sheep's bladder into distilled water at a uniform temperature of 98° F.

The results of his experiments are shown in the following table:—

					Exosmosis begins
Vaseline and iodide of potassium	.	.	.	.	at end of 1 hour.
Lard	"	"	"	.	" " " 9 "
Lanolin	"	"	"	.	nil in 24 "
					Exosmosis begins
Vaseline and carbolic acid	.	.	.	.	at end of 2½ hours.
Lard	"	"	"	.	" " " 7 "
Lanolin	"	"	"	.	nil in 24 "
					Exosmosis begins
Vaseline and resorcin	.	.	.	.	at end of 10 hours.
Lard	"	"	.	.	" " " 15 "
Lanolin	"	"	.	.	nil in 24 "

Dr. Luff concludes with the following words:—"The practical lesson to be learned from these experiments is, that if an ointment is employed with the view of its active ingredient becoming absorbed, then vaseline is by far the best excipient to use; but if an ointment is employed for its local effect only, absorption of its active ingredient not being desired, then lanolin is the best excipient for such an ointment."

There can be little doubt that many readers of this article have been induced to direct their treatment of cutaneous diseases by the conclusion just quoted, but I wish to point out that a very slight change in the conditions of Dr. Luff's experiments suffices to alter his results. In respect of iodide of potassium, which is the only drug I am concerned with at present, the results are not slightly different, for they were nearly the exact converse of the former ones.

I have found that iodide of potassium in vaseline, lard, and lanolin, in proportions identical with those of Dr. Luff's, diffused through sheep's bladder into *ordinary* water at the ordinary temperature of the room, as follows:—

				Iodine detected in water by chlorine-starch test.
Lard and iodide of potassium	.	.	.	in 1 hour, nil.
Vaseline " " "	.	.	" "	" "
Lanolin " " "	.	.	" "	" ?
				Iodine detected in water by chlorine-starch test.
Lard and iodide of potassium	.	.	.	in 11 hours, distinct trace.
Lanoline " " "	.	.	" slight "	" "
Vaseline " " "	.	.	" " "	" "
				Iodine detected in water by chlorine-starch test.
Lard and iodide of potassium	.	.	.	in 86 hours, abundant trace.
Lanolin " " "	.	.	" distinct "	" "
Vaseline " " "	.	.	" slight "	" "

The conclusion of this comparative experiment is simply that lard offers less hindrance to the diffusion of iodide of potassium through sheep's bladder into ordinary water at the ordinary temperature of the room than lanolin or vaseline, and the lanolin is less obstructive, in this respect, than vaseline. We cannot convert this statement into a general conclusion, since a very slight change in the conditions

of the experiment entirely revokes the truth of it in a general sense. Thus if *parchment paper* be substituted for sheep's bladder, we get the following results :—

	Iodine detected in water by chlorine-starch test.
Lanolin and iodide of potassium . .	in 89½ hours, a tinge.
Lard " " " . .	" "
Vaseline " " " . .	" nil.

If such slight changes of treatment induce such notable variations in the absorption of drugs from ointments through dead membranes, what, we may reasonably ask, are we to expect will be the influence of changes of conditions in the living tissues of the skin, in respect of the absorption of drugs through it? The lesson we are taught is that experiments of this sort are absolutely worthless for reliable information concerning the absorption of drugs through the skin, and hence, unworthy of our confidence as guides in practical therapeutics.

CURRENT LITERATURE.

THE PATHOLOGY OF SUDAMINA AND MILIARIA. (*Journal of Pathology and Bacteriology*, Oct. 1892.)

DR. JOSEPH COATS, in a valuable illustrated paper, first discusses the various meanings attached by authors to the terms Sudamina and Miliaria. He agrees with the propriety of the distinction drawn by Hebra between the eruption which accompanies certain general febrile disorders, and that due to excessive stimulation of the sweat-glands in healthy persons. Coats obtained his material from the front of the chest of a patient who died of acute rheumatism and hyperpyrexia. The sections were cut with a microtome after embedding in paraffin, and were stained with alum carmine, washed in water, treated for a few seconds with picric alcohol (alcohol, hydrochloric acid, water, solution of picric acid), then with picric acid watery solution, dehydrated with absolute alcohol, clarified with clove oil, and mounted in Canada Balsam. The result of his investigations is that he considers the "Sudamina" in his case more than a mere stoppage and accumulation in the ducts. The eruption is due to an inflammatory process, and the irritation is centred about the sweat-glands and ducts. Hence leucocytic immigration is excited, which gradually plugs the twisted part of the ducts, and dams back the fluid. The latter is at first clear and transparent, a mixture of serum and sweat; afterwards richer in leucocytes until the collection becomes little more than a small abscess. There is more than a simple dilatation of the duct. It distends, the epithelial cells are stretched and dissociated by pressure and by the passage of leucocytes; an irregular cavity, which tends to assume the globular shape, is formed. It is evident, he says, that in this non-vascular tissue there is something present in this group of acute fevers (puerperal fever, pyæmia, acute rheumatism), which attracts the leucocytes from the vessels, probably some soluble poison in the sweat. He found diplococci, but contents himself with the mention of the fact.

T. C. F.

PITYRIASIS RUBRA WITH HEMIATROPHIA FACIALIS SINISTRA.

Dr. N. DEGOLA. (*Bolletino della Regia Accademia Medica di Genova*. Anno VII°, Fascicolo III, 1892.)

PATIENT ætat. 27, single, carpet-maker, had suffered from pityriasis rubra for more than five years.

History, no hereditary taint of any sort. Two years ago he had variola, and during that illness and for a month afterwards he stated he was perfectly free from any trace of pityriasis rubra. He suffered however from pruritus. The eruption started originally, as well as after the variola, in the same place, *i.e.* the extensor surface of the left forearm near the elbow. In the course of a few

weeks it became universal. It has persisted up to the present time, getting worse in summer and improving in winter.

Status præsens.—The eruption is maculo-squamous in character, and with the exception of the elbows is universal. It is more pronounced on the flexor aspect of the limbs, and the trunk is especially covered with light branny scales. It varies from a pale to a livid red in colour. The skin is harsh and dry, in places scabrous, and its elasticity is diminished. The redness is most marked over the face and neck. The hair is thin over the temples and occiput, and the scalp everywhere covered with shiny scales easily detached. The nails are misshapen and yellowish-white in colour. The lymphatic glands are enlarged in the armpits, especially the left. The mucosæ are unaffected, and the circulatory, respiratory, alimentary and urinary systems are normal. The patient complains of slight pruritus. The face at once attracts attention, the right facial features being much more pronounced than the left. This is rendered still more evident by comparing and measuring the frontal eminences, zygomata and cheeks. There are two spots, one penny and one farthing in size, devoid of pigment, like vitiligo, on the left side of the forehead. Lines and furrows are much less marked on the left half of the face. The left cheek is flabby compared with its fellow, and the left angle of the mouth a little higher than the right. The left pinna is distinctly smaller than the right.

General, tactile, thermic and muscular sensation practically normal.

During the four months patient remained in the hospital, the skin underwent no improvement, and the hemiatrophy of the face became more pronounced.

As regards the skin disease, it was easily differentiated from eczema rubrum by the absence of any exudation and the delicate translucency of the scales.

The absence of any previous affection, *e.g.*, psoriasis, eczema, pemphigus foliaceus, confirmed the opinion that the patient had pityriasis rubra (Hebra), and not secondary dermatitis exfoliativa. Histologically, the derma showed atrophy of the connective tissue in places, and slight round-celled infiltration in the course of the blood-vessels. Here and there a papilla was larger than normal. No atrophy of the sudoriparous or of the sebaceous glands. The epidermis was lax and the cell layers easily separable. The horny layer was thicker than normal. The stratum granulosum was diminished. In the rete mucosum cells like migratory leucocytes were to be recognized.

Micro-organisms (staphylococci) were abundant, and the skin undoubtedly was a favourable medium for their development. Cultures were obtained showing staphylococcus pyogenes aureus et albus.

As regards the hemiatrophia facialis, congenital arrest of development was easily excluded, and the same may be said of the possible view that the right side had hypertrophied.

Dr. Degola refers this complication to disease of the Gasserian ganglion, and, although the pinna is not in the area of innervation by the trifacial nerve, he instances other diseases—herpes zoster, fibromata neuropathica—in which the eruption often extends beyond the limit of distribution of the affected nerves. Finally, he views pityriasis rubra as of neuropathic origin, and agrees with Jarisch, who has recorded a case of scaly-red eruption in which the grey substance of the spinal cord had undergone inflammatory changes. These changes corresponded with the nervous supply of the affected skin area.

FRANK H. BARENDT.

PSOROSPERMOSIS ICHTHYOSIFORMIS. Prof. R. CAMPANA. (*Clinica Dermatologica e Sifilopatica della Regia Università di Genova*, Fascicolo XII, 1892.)

PROFESSOR CAMPANA records a case under this title and gives full microscopic details as to its nature.

The patient was a boy, *ætat.* 12, thin and delicate. No history of any similar affection in either parent or in any relative. It appeared a few months after birth in the nuchal and interscapular regions, and since then has only slightly extended to the sides of the neck. He never had any external treatment, but had taken strengthening medicines.

The eruption is corneo-papular in character, thickly studded in these areas, and becoming sparse towards its limits. Each efflorescence is like a stumpy spine capped with a very adherent dirty scale. When this is forcibly scraped off, a bleeding point results. The non-implicated skin is redder than normal.

There is a molluscum contagiosum on the back of the right ring-finger near the nail. Its pultaceous contents showed the molluscum bodies. An efflorescence was removed and hardened in alcohol. Histologically, the epidermis showed the horny layer greatly increased in thickness, rising pyramidally towards the apex of the papule. The granular layer was also increased to several series of cell-rows, full of eleidine granules.

The Malpighian layer showed the most striking changes. Generally the nuclei were but slightly stained with hæmatoxylin, in marked contrast to the normal surrounding cells. Here and there were seen vacuolated cells in which the nucleus was either absent or appressed to the circumference. Several other cells contained oval or spherical structures which occupied the whole of the cell, the nucleus being flattened out and lying at the periphery. These bodies varied from a nucleus or larger, to a nucleolus in size. With the action of caustic potash, these little bodies were set free from the cells, and apparently a little protoplasm adhered to their periphery. The contents of these structures were made up of little globules arranged in a radiate manner. The wall was transparent; but immediately within this was a granular layer. Instead of the little globules, the periphery may be thickened at opposite poles, enclosing two semilunar bodies.

There was round-celled infiltration in the Malpighian layer; and here and there a chromatophorous cell may be seen.

The derma immediately beneath the horny pyramid showed the papillæ greatly elongated, and an increase in the pigment granules. In the deeper layers leucocytes mapped out the blood-vessels. The hair and sebaceous follicles showed greatly thickened walls; the hair-shaft was either wanting or atrophied.

Prof. Campana does not allude to any similar structures present in the molluscum contagiosum efflorescence, although Prof. Neisser believes that psorosperms are present if they do not actually cause this disease. The plates accompanying Campana's paper certainly resemble those bodies described as psorosperms found in Darier's Disease—*Psorospermopsis follicularis*—and in Paget's Disease of the Nipple. Altogether the whole question is still veiled in obscurity, as no dermatologist has so far succeeded in producing psorospermiosis from Darier's Disease. Molluscum contagiosum has been successfully inoculated by Pick of Prague; on the other hand Török and others dispute *in toto* Neisser's interpretation of these intracellular bodies.

FRANK H. BARENDT.

THE TREATMENT OF DERMATITIS HERPETIFORMIS. LOUIS A. DUHRING, M.D. (*American Journal of the Medical Sciences*, February, 1891.)

THE author says that each group of cases, based on the etiological factors at work, requires special handling, and hence he believes that no class of remedies can be recommended which would be suitable to all cases. In his experience milder preparations are required for the erythematous, than for either the vesicular or bullous forms, and the erythematous variety is the most difficult of all to control by local means, while the vesicular is the most easily influenced. He considers that the only class of remedies from which benefit is to be expected is stimulants, especially those which act revulsively. These are tar, in the form of oil, ointment, and alcoholic or alkaline tarry lotions, carbolic acid, sulphur, Vlemingeckx's solution of sulphurated lime, thymol, ichthyol, hydronaphthol, resorcin, and fluid extract of *grindelia robusta*. Of all these remedies the most valuable he considers to be sulphur in the form of an ointment, about two drachms to the ounce. It is especially useful in the vesicular and pustular varieties, and also in the bullous form; in the erythematous, however, it proves too irritating. It should be applied with friction, and with sufficient force to break down the vesicles, pustules and blebs as speedily as possible.

In some cases a hot bath, for an hour or so, on going to bed was found beneficial. Of the internal remedies none appeared to have much effect, but arsenic came first; however, this was often disappointing, and in some cases seemed rather to aggravate the disease, but he believes it well worth a trial in the vesicular and bullous varieties.

W. KNOWSLEY SIBLEY.

THE TREATMENT OF CHRONIC RINGWORM. LOUIS A. DUHRING, M.D. (*American Journal of the Medical Sciences*, February, 1898.)

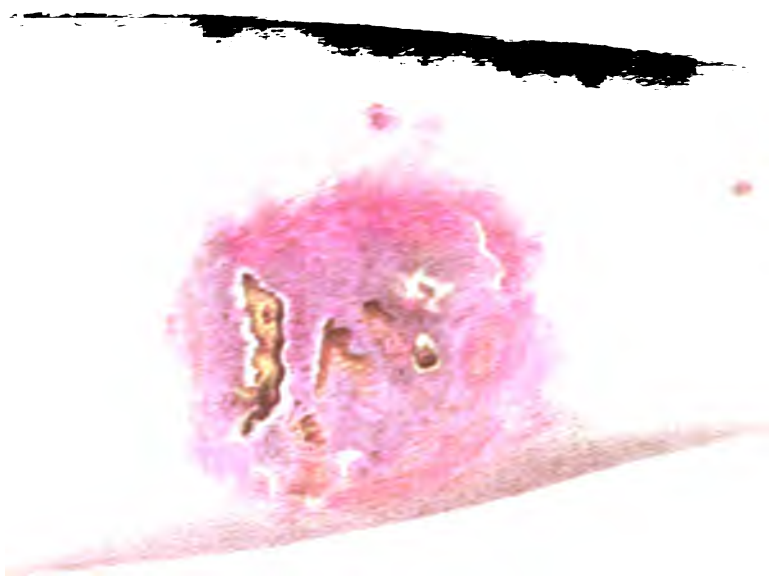
FORTY-EIGHT cases of ringworm, as demonstrated by the microscope, were treated. They were all chronic, some having existed for three years, the average for about one year; they were all in good hygienic surroundings and had been properly cared for. In thirty-two cases the disease was extensively developed.

The paper is mainly directed to the treatment. Epilation is advocated where practicable, which it was not in these cases.

Carbolic acid was tried either mixed with olive oil and glycerine, or in combination with ung. hydrarg., nit., and ungt. sulphuris, but did not prove of much value. The effects of tar combined with carbolic acid or either of the above ointments were disappointing. Iodine in various forms, as strong tincture, Coster's paste, &c.; oleate of copper (3i and 5ii to the 3i) and the mercurials were all of little or no use, calomel (3ss. to ungt. zinci 3i), however, proved very useful in subduing inflammation from whatever cause.

The drug, of which the author speaks in terms of praise, is chrysarobin, the strength varying from grs. xv up to two drachms to the ounce, some patients tolerating much stronger than others. The smallest possible quantity is to be used and rubbed well in with a bit of cloth or a mop. It should be used cautiously; but in chronic cases there does not appear to be much danger from its employment if due care be exercised in avoiding the face, in making the applications sparingly and in gradually increasing strength.

H. W. MARETT TIMS.



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ON THE ERYTHÈME INDURÉ DES SCROFULEUX OF BAZIN.

BY T. COLCOTT FOX, M.B. (LOND.), F.R.C.P.

DURING recent years attention has been attracted in London to certain manifestations of disease characterized by the evolution of indolent inflammatory deep-seated nodules of special types, occurring about the legs particularly, but also on other parts. I may say at once that many of these nodules bear a striking resemblance on the legs to tuberculous, and more especially, to syphilitic nodular gummata, whilst on the upper extremities some of them approach rather to the chilblain type. Quite a number of these cases has been exhibited to the Dermatological Society, but so far no formal discussion has arisen in England. It is with the object of provoking such a discussion that I venture to relate my experience, which chiefly relates to the form known as the Erythème induré of Bazin.

Cases of the type last mentioned are not uncommon, nor are they very common. I have met with them occasionally in hospital wards, where they are, I believe, universally regarded by surgeons as manifestations of syphilis, hereditary or acquired.

At the recent International Congress of Dermatology at Vienna I noted a typical case in the person of a young girl in one of Professor Neumann's wards, and this was regarded as syphilitic. So far as my knowledge goes the literature on the subject is limited.

Bazin seems to have been the first to differentiate the disease from erythema nodosum in his "Leçons sur la Scrofule." I have not the

first edition at hand to refer to, but in the second edition, 1861, he writes as follows:—"Erythema induratum, of scrofulous nature, is not rare; it is characterized by red plaques, indurated, upon which the finger, when applied momentarily, makes the redness disappear to quickly return in a few moments. One feels on and under the skin an induration which sinks more or less deeply into the subcutaneous connective tissue. The redness, more or less dark, pretty often violaceous, more marked at the centre, blends insensibly at the circumference with the normal colour of the skin. There is no itching upon these plaques; pressure with the finger is hardly painful. This affection is observed commonly upon the legs, more often perhaps in girls than in boys. I have often met with it upon the legs of young washerwomen, in young girls offering all the attributes of the 'fraîcheur et embonpoint scrofuleux.' Its seat of predilection is the external and inferior part of the leg. One sees it sometimes also situated a little above the heel along the tendo Achillis. Lastly, one can observe it also on the face, and I have seen it upon this region alternate with scrofulous ophthalmia." On page 198 he varies his description with regard to the colouring, and states that the colour is the same over all the extent of the plaque, the induration is equal, and pressure is painless. At page 501 he records a case in detail, observed in a washerwoman in 1858, and of six months' duration. The lesions did not ulcerate, were not painful to pressure like those of E. nodosum, nor was there the play of colours observable in the latter affection. The woman was in hospital for six weeks, and was treated by tisane of hop and syrup of iodide of iron internally, by starch baths, and later by sulphur baths, externally, but was not completely cured on discharge.

The year previous, in his "Leçons sur les Affections Cutanées de Nature Arthritiques et Dartreuses," 1860, p. 98, Bazin also writes thus:—"Scrofulous erythema manifests itself in patients who have a soft constitution and the lymphatic temperament. It is characterized by a plaque, usually single, of a vinous red, larger than the patches observed in erythema nodosum, situated at the anterior or external part of the legs, not painful, constituted by a uniform induration which is limited to the skin and does not extend into the connective tissue." Febrile symptoms are absent. The late Professor Hardy was also long acquainted with the affection, but

whether he observed it independently of Bazin I know not.* Trousseau, in his lecture on *E. nodosum*, quotes Hardy thus:—“*Erythema nodosum* may become chronic by the appearance of a succession of eruptions during several months, or even, it may be, during one or two years. When the disease takes this chronic form, the nodes on the legs sometimes become elongated, and then soften and ulcerate. The ulcerations are round, excavated and of a greyish colour at the bottom; they resemble syphilitic ulcers.” Trousseau suggests that it is an anomalous cutaneous affection. There is nothing in this brief description by Hardy to distinguish what may be conveniently referred to as Bazin’s disease from the now well-known scrofulo-tuberculous gummata. However, in his “*Traité pratique et descriptif des Maladies de la Peau*,” 1886, Hardy states, under *E. nodosum*, that in scrofulous subjects the hard projections can persist during several months and even terminate by an ulceration, with greyish base, little disposed to cicatrize spontaneously. Bazin, he adds, described this chronic form of *E. nodosum* under the name of *Erythème induré des scrofuleux*, and Hardy would be equally dis-

posed to believe that this erythema is a special phase different from *erythema nodosum*. Even this further notice fails to make it

clear whether Hardy was talking about the same thing as
 now nothing of any other literature on the subject till that
 shed in the last few years. Judging from this absence of
 ture, and from the terms in which French authors have recently
 en, I conclude that even in France the malady had been
 tten or had escaped prominent notice. Certainly it had not
 specially studied in England, though Mr. Hutchinson possesses
 a wing which he had executed some years ago.

At the weekly clinical meeting of the Hôpital St. Louis on 29th
 ember, 1888 (*Ann. de Derm. et de Syph.*, T. x, 1889), Dr. Besnier
 sented a young woman with an *erythème nouveau chronique des*
membres inférieurs, which he attached to Bazin’s *E. induré*. On the
 legs were “aphlegmasic nodosities, springing from the hypoderm,
 implicating secondarily the superficial layers of the skin with the
 assumption of a livid colour, but not undergoing irritative regression,

* He at once recognized the nature of the case in Neumann’s wards in Vienna, as
 have referred to. (J. J. P.)

and only ulcerating accidentally in response to external injury. These nodosities have the closest objective analogy with syphilitic or scrofulo-tuberculous gummata, from which they only differ roughly by their immobility, by their prolonged duration, and the absence of softening. They differ from common erythema nodosum by their exclusive localization to the legs, their development over any part of the surface of the limb, their long duration and their indolence. Iodide of potassium is without action on them; they are cured by rest in the horizontal position and methodical compression."

"These nodosities are only an epiphenomenon in the affection described, imperfectly, it is true, by Bazin under the name erythème induré; one sees them almost always conjoined with erythromelalgia of the leg, or with hypertrophic, doughy œdema, in young girls with irregular menstruation, and whose occupation obliges them to remain standing a long time."

At the weekly meeting of the Hôpital St. Louis, on the 17th January, 1889, Dr. Feulard brought forward a case which he thought absolutely typical of Erythème induré. The case is reported in detail in the *Ann. de Derm. et de Syph.*, T. x., 1889. The patient was a girl of fifteen, a washerwoman, with irregular menstruation, who had to stand a good deal. Dr. Feulard said she presented all the attributes of the scrofulous temperament. She was big and well developed, with a carnation colouring and very large mammæ. She had chronic blepharitis, and had suffered in infancy from scarlet fever, typhoid fever and enlarged glands in the neck. The girl was a virgin, and there was no clue to syphilis in the family history or otherwise, unless the teeth be considered such. The four inferior and the two superior median incisors were affected with sulciform atrophy (Parrot). The four canines were the seat of cuspidian atrophy (Parrot), and the first right great molar carious. The affection of the legs was of one year's duration. On the antero-internal aspect of the right leg were some patches of livid colour, ill-defined, and without special form, desquamating a little on the surface, painless on palpation, whilst three or four little lumps, the size of a large pea, were to be felt situated deeply under the skin. On the left leg, at the upper external part, was a marked swelling, a little lumpy, 10 centimètres broad by 12 long, violaceous red, diffuse, slightly desquamating, hard and painful to the touch, and giving the sensation of a "véritable

gâteau" adherent to the skin, and invading the region of the external calf. This induration, but not the redness, was prolonged along the peroneal region to four fingers' breadths from the external malleolus. Fatigue, pain, and increase of swelling came on after standing, and pain disappeared after rest in bed.

Dr. Besnier and Prof. Fournier added some interesting remarks. Dr. Besnier said (1) there were several varieties of *E. induré*; (2) there was an *E. induré*, nodose, with patches, chronic, evolving during long years, and of which the differential diagnosis from gummata, syphilitic or scrofulo-tuberculous, could be very ambiguous, and was often incorrectly made; (3) that the main local indication in treatment was elevation of the limb when the patient was in bed, and compression when in the standing posture. In some cases it was necessary, to bring about a cure, to discontinue all standing. Apart from these indurated or chronic nodose erythemata there were the indurated erythemata met with in great general maladies, as syphilis and leprosy. Prof. Fournier pointed out the analogies of these patches of *E. induré* with certain gummatous infiltrations, "en nappe, en gâteau, en galette." The duration of the erythemata during years, differentiated them from gummata, which in some weeks, or at most months, softened and were eliminated.

At the meeting on June 20th, 1889, Dr. Feulard showed the girl again. The condition was ameliorated in hospital, with disappearance of the erythema, but was not really cured, and the lumps remained. In hospital one of the lumps softened and opened quite like a scrofulo-tuberculous gumma.

At the 116th Regular Meeting of the New York Dermatological Society (*J. Cut. and Gen.-Urin. Dis.*, September, 1892), Dr. Elliot presented a young girl with multiple nodules of the leg, undergoing resolution and cicatrization with ulceration. "She stated that it had begun eight or nine months before as one firm dark-red lesion, and this was followed by others grouped around it. No ulceration had occurred, but involution would take place and be followed by marked atrophy. At present a space about three inches square was occupied by the dermic infiltration and the cicatrization. There were no subjective symptoms. Under local and internal specific treatment, resolution had begun and was going rapidly forward." The girl could give no history bearing in the slightest degree upon the origin of the

disease. These are all the particulars given, but the case is possibly one of those now under discussion. Dr. R. W. Taylor referred to a description in the 5th edition of Bumstead and Taylor on "Venereal Disease."

In Kaposi's "Lectures" (2nd French edition, annotated by Besnier and Doyon), Vol. I., p. 393-4, the following remark occurs:—"Non-ulcerated gummata of the legs can be confounded with Erythema nodosum, if, as I have recently seen in a young girl, they are situated on the two legs. Syphilitic nodosities are always distinctly defined and easy to pick up between the fingers. Erythematous nodosities, on the contrary, have not defined borders. Cases reported by authors of ulcerated erythematous nodosities have a connection with errors of this kind." In relation to this statement, the editors remind the reader that "nodosités rhumatismales" are not erythematous. They also state that scrofulo-tuberculous or syphilitic gummata remain for a long time hypodermic and, when they reach the dermis, undergo phenomena of specific phlegmasia, never seen in the erythematous nodosities.

Crocker ("Diseases of the Skin," 2nd edition, 1893, p. 75) considers the affection a rare one in this country. "Strumous girls and young women are most liable to it, but it may occur in boys, and I have seen it in a woman over fifty, who had, however, suffered from the same thing when a girl. In a severe case, in a woman aged thirty-seven, there were a few nodules on the upper limbs. It is most frequent in winter, especially in those who have cold hands and feet and have much standing, hence washerwomen are frequent victims. Pain and tenderness are usually absent, but may be marked. The absence of febrile symptoms, the long duration, the relapses and indolent characters of the affection, and the small number at first of the lesions, distinguish it from true erythema nodosum. From gummatus syphilis, it differs in its etiology, duration, evolution, and finally, if there is still doubt, by its not responding to specific treatment; indeed iodide of potassium often aggravates it."

Such is the literature so far as it is known to me, and I will now add some cases of my own.

My attention was first attracted to the malady in the year 1887, and at the time I had quite overlooked Bazin's description. I recorded the following (Case I.) under the heading *Scrofuloderma*, in the *Westminster Hospital Reports*, Vol. IV., 1888, p. 144.

"Annie B—, æt. 17½, sent from a home for destitute females, is a stout girl with somewhat squat figure and unhealthy appearance. The lower third of both legs all round is studded with about a dozen phlegmons the size of a hazel-nut, violaceous in colour, very indolent, projecting, oval, or rounded in shape. Some are surmounted by a desquamating plate, and others have resolved, leaving a livid stain. One on the front of the middle of the shin is not seen, but only to be *felt* subcutaneously like a nut. On the left leg most of the lesions are broken down into punched-out ulcers, and they are confluent here into a diffuse infiltration. The whole appearance reminds one very much of certain late syphilides, but no clue can be obtained to any syphilis, hereditary or acquired. The condition has lasted three years. She has a large suppurating gland beneath one jaw."

I was greatly puzzled at the time as to the nature of the nodules, and with many misgivings called them Scrofulodermata. In February, 1888, the patient again came under my care, having, meanwhile, been in the Infirmary. The legs had become bad again and fresh nodules had broken down into punched-out ulcers.

CASE II.—Elizabeth Murphy, aged 12, was seen by me on October 12th, 1888. I could not obtain a clue to any syphilis. There were about a dozen phlegmons distributed over and below the calf of each leg. These nodules were livid in colour, the size of a hazel-nut, imbedded in the skin. One or two of them had a point of suppuration like a boil. There were also some scars left by the necrosis of former nodules. The duration of the affection was said to be one year. I have no record of the result of any treatment.

CASE III. (see illustration).—Ellen Pauline Dalton, aged 13 years, a spare girl of somewhat stunted growth and earthy complexion, applied at the Westminster Hospital in 1892. She had deeply pitted scars, the result of varicella in early life. Beyond the appearances already referred to there was no evidence of hereditary syphilis, except perhaps the small size of the second upper incisors. No family history of hereditary syphilis, no history of acquired syphilis: no tuberculous history, personal or family.

She suffered from chilblains last winter and some preceding winters. During the last four months she had developed nodules on the legs at the junction of the calves with the lower third of the legs. The nodules

are painless and do not itch, are deeply imbedded at first, and better felt than seen. They gradually project, the overlying skin reddens and assumes a violaceous tint, and they slough out, leaving rounded, deep, punched-out ulcers, exactly like those left by syphilitic gummata. When the girl came under observation, there were several nodules, from a pea to a hazel-nut in size, on the legs, several forming a confluent patch with others disseminated around. Some had necrosed, leaving punched-out circular ulcers. There were also some plugged and inflamed follicles and boil-like swellings in the case, possibly a complication due to infection by the discharge from the ulcers.

She was treated as an out-patient with an Iodide of Potassium mixture internally, and Ung. Iodoformi externally, for several months. The ulcers slowly healed, but the nodules (June 1892) did not completely disappear.

CASE IV.—E. Mount, aged 15, a healthy-looking girl, with chronically enlarged glands in the neck, came to the hospital on January 13th, 1898. There was no clue to hereditary syphilis in the teeth, eyes, family history, etc. She had five brothers and sisters alive and well, but lost a brother and two sisters in their infancy. She presented typical violaceous nodules, the size of peas, imbedded in the skin all round the lower third of the legs. The nodules were discrete and about a dozen in number. She gave their duration at three months. I ordered her to rub them with Compound Camphor Lintiment, and placed her upon a Sulphate of Iron mixture, and on March 22nd, 1898, all the nodules had disappeared.

Cases V. & VI. are more extensive.

CASE V.—Annie B——, aged 22 years, a well-nourished, but rather pallid and flabby-looking general servant, applied at the Westminster Hospital in February, 1892, having been obliged to resign her situation owing to the painful affection of her legs. She stated that she had never suffered from any illness of moment, except scarlet fever. Her father probably died middle-aged; her mother suffers from bronchitis and asthma. She has two brothers and one sister living and healthy, but a sister died of consumption, and a brother, aged 16, of some cause unknown. The patient has never had any general eruption, sore tongue, bad eyes, or any symptoms suggesting acquired or hereditary syphilis. The teeth are good. She has never been subject to chilblains. She suffers rather from cold

feet. Five years ago, after an attack of scarlet fever, rheumatism, and dropsy, she was for four weeks in the Reading Hospital with bad legs, due to the ulceration of "lumps" under the skin of her legs, and *backs of the fingers and hands*. Scars were left and are plainly visible in these situations. Eight months ago the lumps reappeared on her legs but got better. Since Christmas 1892 they have been re-forming. There are no varicose veins, but the legs are slightly puffy about the ankles. On the left leg there is a large irregular area of violaceous, solid infiltration on the outside and back of its lower third, and this infiltration has broken down into ulcers here and there, which tend to become confluent with sinuous punched-out borders, and clean floors. Up the inside and back of the leg, from the malleolus to the lower third of the thigh inclusive, are studded about twenty lesions and one or two marked, white, foveolated, rounded or oval scars. The lesions begin in deep-seated pea or hazel-nut-sized nodules which can be felt but not seen. They are very indolent, not particularly painful even on handling, and slowly involve the skin to form a dusky red, or violaceous, rounded or oval spot, and slowly form a nut-sized projection, which is clearly visible. At least half the number have broken down exactly like gummata. The right leg is similarly affected, but not to the same extent. The patient was kept in bed in the wards of the hospital and given the Mist. Hydrarg. Biniodidi of the Hospital Pharmacopœia, whilst the ulcers were cleansed and dressed with Lotio Nigra. Under the influence of, or during, this treatment the legs rapidly progressed to a cure.

CASE VI.—Mrs. G——, aged 48, was brought to me on April 26th, 1893, suffering from bad legs. She was a big-framed, stout woman. She had given birth to two children; the first died young, the second, though always "delicate," is living, aged 11 years, and well-grown. Mrs. G—— has noticed nodules under the skin of the legs for eighteen months, and syphilis has been positively diagnosed, while treatment with Mercury and especially Iodide of Potassium has been carried out accordingly, but without effect on the disease. Mr. G——'s habits were rather irregular before his marriage, but there is no clear history of syphilis, nor has Mrs. G—— had any general eruption or miscarriages. She has suffered, however, from sores on the tongue, but she is very dyspeptic, and no scars are left in the mouth or elsewhere.

On examination about nine livid nodules, the size of a hazel-nut,

may be seen projecting around each leg from the ankle to the knee, and about a dozen others are felt imbedded more or less deeply. She states that they commence below the skin and gradually involve it, forming a livid spot. After a time they subside, or open by a little hole and discharge a little fluid. Below one knee is a confluent group of three nodules. The legs are slightly œdematous, and some veins are prominent. The nodules ache towards the end of the day, when walking has been indulged in.

I ordered Mist. Hydrarg. Biniodidi internally, the nodules to be painted with an Iodine Liniment, and the legs to be carefully bandaged. The œdema and pain disappeared, the one open wound healed, the nodules flattened down, and one or two disappeared, and the patient was altogether more comfortable, but after a month's treatment the majority of the nodules remained as firm, nut-sized, rounded lumps in the depths of the skin, and many still marked out by livid areas of skin.

The nature of the following cases may perhaps be disputed :—

CASE VII. (one leg only affected).—Mary R.—, aged 21, applied at my Skin Department on October 26th, 1892. She is a big, stout, highly-coloured Irish girl, living in a common lodging-house in Clapham and going out washing. On the back of one leg only, at the lower border of the gastrocnemius, is an area of livid infiltration and ulceration. The infiltrated area is clearly built up of separate nodules, and several outlying discrete livid nodules are to be observed and felt. Duration five or six months. I cannot obtain any history of syphilis.

The patient was placed upon Iodide of Potassium, and the ulcers were dressed with Iodoform and Eucalyptus Ointment, but no improvement resulted. Indeed fresh nodules appeared on the outer side of the leg, and one of the older ones necrosed out, leaving a punched-out ulcer.

CASE VIII. (E. induré, complicated by lupus erythematosus).—Elizabeth P.—, aged 28, a cook, was sent to me by Dr. Charsley, of Slough, on August 10th, 1892. She is a good deal on her legs, and is not robust. She is thin and pallid, her physique is poor, and her hands habitually cold. Several of her maternal uncles and aunts died of phthisis, but her parents and her own brothers and sisters are alive and well. On the back of the pinna of each ear are one or two small chronic erythematous macules. On the back of one finger is another macule almost replaced by a scar. In the middle line of the

forehead at the junction with the hairy scalp are two lesions, one an erythematous macule, the other a deep rounded scar the size of half-a-crown. These lesions had been appearing for four years, and I made the diagnosis of lupus erythematosus, though the explanation of the large deep scar of the forehead puzzled me.

But there were other lesions. On one ear was a pale, hard, papule, nearly the size of a split pea, and covered with a thick shining layer of corneous epithelium. On the inside of each leg below the calf were three or four well-marked rounded scars, the size of a three-penny piece, and amongst them several painless, deep-seated pea-sized nodules were felt, but not to be seen. She states that she has suffered from this eruption of the legs from fourteen years of age.

In January, 1893, the patient was admitted into the hospital, as the skin disease interfered greatly with her employment. She then presented typical violaceous, pea-sized, imbedded nodules at the lower border of the gastrocnemii. They were mostly discrete, but there was one infiltrated confluent patch. I discovered by palpation also on the backs of several fingers of one hand deep-seated, moveable, firm nodules, not discolouring or projecting the skin, which did not appear to me to be rheumatic nodules. Moreover, along the fingers were small inflammatory nodules, the size of a split pea, some of which pustulated. I destroyed the face patches, and rest in bed had a very favourable effect on the lesions of the leg, but they were not cured.

The next case will still further illustrate the occasional difficulty of diagnosis.

CASE IX.—Mrs. E——, aged 36, came as an out-patient to the Westminster Hospital on September 28th, 1892. She had been under my care some time previously with what I diagnosed as a syphilitic gumma of the leg. On the second visit she had a single projecting nodule, the size of a split walnut, which I found to be quite indistinguishable in appearance from a lesion of erythema nodosum. On the back of her left hand I found two or three deep-seated lesions, which I diagnosed as rheumatic fibrinous nodules. Mrs. E—— had suffered from rheumatic fever some years before. As Iodide of Potassium, which the patient had been taking on her own account for some weeks, proved ineffective, I ordered her a Salicylate of Sodium mixture, but she was unrelieved, and the tuber on the shin remained unaltered. I noticed a few scars about the legs,

which she attributed to scalds, but their rounded shape, and finger-nail size, seemed to negative this explanation. On further examination I detected by palpation a number of subcutaneous nodules just below the calf of the left leg, and over one or two the skin had a purplish discolouration. I again administered Iodide of Potassium in conjunction with Iodide of Mercury, and the E. nodosum-like tuber slowly disappeared, but not the other nodules.

(To be continued.)

ON THE INFLUENCE OF SOLAR RAYS ON THE SKIN.

BY ROBERT L. BOWLES, M.D., F.R.C.P. (LOND.)

THE recent exceptionally hot weather, and the advent of perhaps even hotter weather, when holiday-seekers will be exposed to the irritating influences of the sun's rays on sea and river, on Alpine snows, and in many unconsidered ways, seems to me a propitious moment for claiming attention to the subject of this present communication.

From observations on sunburn extending over several years, I am convinced that the subject is more far-reaching and of wider scope than, without reflection, would generally be admitted ; but it is one that must eventually arrest the attention, not alone of the dermatologist, but of the physician, the surgeon, the physiologist, and the physicist.

It is not proposed to deal with it in its details, but to let observations already made demonstrate some of the many points of interest which this great subject affords to every one who gives it his consideration. For this purpose I will draw largely from a paper on "Sunburn on the Alps," which first appeared in the *Alpine Journal* in November, 1888, and from a pamphlet on the same subject with a few additions, subsequently published by Stanford of Cockspur Street.

It will, I think, be readily conceded by Alpine climbers that sun on snow burns more quickly than on rocks or in the heated valleys at a lower elevation, although one may feel the heat more in the two latter situations ; it is when one reaches the snow that one adopts veils, masks, and snow-glasses. This increased power of burning appears somewhat singular when one reflects that the heat rays must be occupied in the melting of the snow and thus rendered latent.

Glass-workers, iron-workers, and others are constantly exposed to a heat of four or five hundred degrees Fahrenheit, and yet do not become burnt ; and there can be little doubt that the enormous

radiation from heated rocks and valleys, in addition to the direct rays of the sun, make up an amount of heat far greater than is ever experienced on even a very sunny snow-slope, and yet one does not become sunburnt. How grateful is the change from the hot and oppressive rocky moraine to the refreshing coolness of the glacier! No doubt the surface of the snow reflects and disperses much heat, but certainly far less than it receives; for, as above stated, heat rays are absorbed and rendered latent by the snow melting and evaporation. Experience fully corroborates this, for one may often lie on one's back and freely expose the face for long periods to the sun, and yet remain unburnt. There must, therefore, be some other factor in sunburn than heat alone.

Many artisans are exposed to far greater heat than travellers on a snow-slope, and do not become burnt. Dr. Tyndall first drew my attention to the very interesting and significant fact that he was never more burnt on the Alpine snows than he was whilst experimenting with the electric light at the North Foreland Lighthouse, where there was no heat sufficient to produce such an effect, and where no snow was present. With the wonderful advances in the use of electricity our knowledge on this point is greatly increased.

So far, then, all evidence goes to prove that some other active principle must be at work, besides heat, to irritate the delicate capillary vessels of the skin, and to cause them to fill with blood and exude those products which doctors know to be connected with inflammation, giving rise to redness, swelling, blistering, and subsequent peeling of the skin. I am aware that sometimes, in peculiar conditions of the atmosphere, the direct sun's rays will burn. I have met with some singular instances where several persons have been burnt on the same day, even in England, who had never previously suffered in that way. I am further aware that sometimes (not always) on a ship's deck in a dead calm one may be severely burnt, and that in boating on a river the same may frequently happen. These experiences do not, however, detract from the induction that there is in snow-burning some cause in addition to heat which is constantly in operation; indeed, they raise the suggestion that the sun's rays are in some way, hitherto unexplained, at times acted upon by atmospheric, electric, or other causes, and brought into a condition similar to those rays which are reflected from snow. Sunlight

reflected from freshly fallen snow acts much more energetically on the skin than that reflected from older snow.

If these premises are in the main correct, there are other matters of interest connected with snow-burning, such as its modifications by colour and complexion, or susceptibility of the nerves of the skin, its effects on the eye in producing snow-blindness, the dark colour acquired in the Upper Alps by the chalets, where they are exposed to the combined influences of sun and snow, and the curiously brown colour of the complexions of those who spend their winters in the Engadine.

In illustration of some of the points raised, I would relate the following observations. A gentleman (Mr. W.) tells me that on July 9, 1886, he crossed the Findelen glacier to ascend the Findelen Rothhorn, and that he had felt no discomfort whatever from the sun until they had arrived nearly at the top of the mountain, when they crossed a patch of fresh snow, and in five minutes he began to feel the stinging, burning sensation of sunburn, and in the evening the usual symptoms were fully developed. On no place besides the snow did he feel the sun, and he was only on the snow for ten minutes. A gentleman and lady (Mr. and Mrs. L.) tell me that they were never more burnt in their lives than when ascending the Pigne d'Arolla, and they had not a ray of sun from the moment they started until their return. They were enveloped in clouds so thick near the snow that the guides had the greatest difficulty in finding their way. They were, moreover, quite cold—so cold, indeed, when standing, that the lady's hands were blue and senseless: both she and her husband had considerable experience in high Alpine regions. The Pigne d'Arolla is a mountain of 12,472 feet high, with very much snow on its surface. Probably the cloud overhead was not very thick, and acted in some way on the sun's rays so as to develop their irritating properties.

In June, 1879, a gentleman of very fair complexion and light eyes, almost an albino, became extremely ill from the effects of sun-burning. He had been up the Titlis on the preceding day; his face was immensely swollen, red and painful, and his arms up to the elbow in the same condition, hard and extremely painful. They felt benumbed, stiff, and useless; he had scarcely slept the preceding night in consequence of the pain and discomfort. The next day the parts were all

covered with yellow blisters, and he felt very ill in himself ; the only parts not inflamed were those that had been protected by spectacles.

It appeared that he had turned up his shirt-sleeves on ascending the snow-slopes. He was quite ill and confined to his bed for a time.

On a subsequent occasion, a few years later, I encountered the same gentleman at Bel Alp on the morning after he had made an ascent in the snow ; again he was suffering severely from sunburn. The face was much swollen, but I observed that it was pitted in various parts, and that each pit corresponded to a freckle. The following day the face was more swollen and inflamed, and the third day the pitting had all disappeared. It would seem as if the brown pigment of the freckle had prevented the immediate influence of the light rays, but that subsequently the freckles had become involved in the general inflammation.

Every one knows the beneficial influence of a brown veil and brown glasses to protect the eyes, and I presume that freckles must have a similar protecting influence. I determined to try the effect of colour on my own person. I painted my face brown, and on a brilliant day ascended the Gorner Grat at a time when there was much snow. As it was the first fine day of the season, four different parties had started for the ascent of Monte Rosa ; out of the one hundred people staying at the Riffel Alp Hotel, about eighty ascended the Gorner Grat to watch the climbers, I myself amongst the number, with my face, as I have already said, painted brown. In the evening every individual who had been up the Gorner Grat (myself excepted) was smarting under the effects of sunburn. The twenty people who had kept near the hotel and had wandered about the woods during the day, although they had been fully exposed to the sun, were quite unaffected. On the following day I made another excursion on the snow with half my face painted blue, and the other half coloured with burnt cork. Unfortunately I was overtaken by cloud which lasted the whole day, and my skin, perhaps naturally, showed no result. As I had to leave for England the day after, I had no opportunity of prosecuting my experiments further.

Since then, however, I have performed many experiments on the same lines with grease points used by actors for "making up" on myself or friends, on ladies, when I could catch willing ones, and on

boys ; these experiments all corroborated the results of those of the day on the Gorner Grat : where paint *was* there was no burning, and where it was *not* there was inflammatory action more or less severe.

In connection with this I took the temperature, as carefully as one could under the circumstances, on rocks, on grass, and on snow, at the same moment and at the same elevation, and I quite satisfied myself that on snow, where one burnt most, the temperature was lowest.

Professor Langley in his ascent of Mount Whitney, in the Sierra Nevada, about 300 miles south of San Francisco, found that the higher he went " the cooler it grew, and the more the sun burnt the skin—quite literally burnt," so that by the end of the third day his face and hands " began to look as if they had been seared with red hot irons."

Professor Langley infers that his sunburn sufferings were due simply to his being in a clearer atmosphere, nearer to the sun, and in consequence that the sunlight energy was less affected than lower down. To an extent, no doubt, this was so, but a careful perusal of these pages will show very conclusively that it is not that alone, for I have pointed out that at low elevations—on the earth's surface, on the sea, on rivers, and on certain sands and rocks—one may be severely sunburnt, and that at higher elevations one will not be burnt. on grass and on rocks of a different nature and colour, whereas one is at once burnt on snow at such a height. This experience is so common amongst Alpine climbers, that in my opinion there can be no doubt that, under certain conditions, there is a peculiarity in the nature of light reflected from snow and other white and bright surfaces. Professor Langley says the rocks which he ascended were of grey granite, and from what I have already indicated it is clear that crystalline grey would be certain to modify and possibly intensify light rays reflected from their surfaces.

The Hon. Ralph Abercromby, in a letter to *Nature*, April 15, 1886, relates, as one of those strange anomalies in which physiological experience contradicts the teachings of pure physics, first, that in Morocco and all along the north of Africa the inhabitants blacken themselves round the eyes to avert ophthalmia from the glare of the hot sand ; that in Fiji the natives, who are in the habit of painting their faces with red and white stripes as an ornament, invariably

blacken them when they go out fishing on the reef in the full glare of the sun ; and, lastly, in the Sikhim Hills the natives blacken themselves round the eyes with charcoal to palliate the glare of a tropical sun on newly fallen snow ; and he further tells me that during his experience of a winter in Canada he was never inconvenienced by the glare, for the simple reason that the air is usually so hazy that the sun is more or less dim.

Mr. Stanley, in his book, *In Darkest Africa*, at p. 156, says, " that the complexion of the natives of Mupe is more ochreous than black. When a body of them is seen on the opposite bank, there is little difference of colour between their bodies and the reddish clayey soil of the landing-place. Much of this is due to the Camwood powder, and with this mixed with oil they perform their toilet. But protection from sunshine considerably contributes to this light colour. The native boy, Bartartu, for instance, was deprived of this universal cosmetic made of Camwood, and he was much lighter than the average of our Zanzibaris."

In relation to snow-blindness, which is certainly associated with sun-burning, I saw some years ago in the *Lancet* that a German savant had discovered that sunlight rapidly destroyed the visual purple of the retina, and that this effect was much modified when the light was passed through coloured glasses, and that brown glass, more than any other, prevented those changes taking place in the retina.

In the *British Medical Journal* of June 24, 1898, is a paper on "Eye Symptoms after Witnessing Electric Operations," by Mr. Hewetson, Hon. Surgeon to the Eye Department of the Leeds General Infirmary. He relates cases of electrical engineers whom he found suffering from severe pain in the head and eyes, unable to open their eyes, the blepharospasm being so severe ; the conjunctiva injected and the pupils contracted and fixed. All this arose from exposure to the electric light rays, and rays from the molten iron.

Six or eight hours afterwards the pain had gone, the conjunctiva was less injected, the vision was perfect, and the pupils and tension normal. From the rapid recovery of the vision, and from the utility of the application of cocaine, it is probable that the chief suffering arose from the irritated filaments of the fifth and vaso-motor nerves, and it would be worth trying how much suffering might be saved by

painting the neighbourhood of the eyes and the eyelids with some one or other pigment, like the natives of Sikhim, for the prevention of snow-blindness.

In my experience sunstroke is not heard of in mountainous regions, and Mr. Ralph Abercromby, who has travelled much, tells me that equatorial regions are not the worst for sunstroke, but subtropical and semitropical dry countries, such as Scinde, S.W. Bengal, United States, Italy, &c., &c.

Lately, however, I have been struck by an account by an Indian officer (signing himself "R. E.") of his sufferings from sunstroke and his cure, on lines similar to those connected with sunburn and snowburn. I think it better to give it in his own words. It appeared in the *St. James's Gazette* of July 4, 1893.

"I was invalided home from India in 1877, after endeavouring to fight the sun very unsuccessfully for about ten months, and it took me five years to shake off the consequences.

"In 1884 I was ordered out again, and, judging by my previous experiences, I thought my best plan would be to write in advance to the leading undertaker in Bombay, enclosing full directions and a list of friends to be invited to the ceremony, for I was perfectly aware that I could not even face the English sun with impunity, let alone the Indian one. Various things prevented me from carrying out this plan before sailing, and on the voyage it occurred to me that there might be another alternative.

"Being an amateur photographer, I was aware of the difference between the heat and chemical rays of the sun and their distribution in the solar spectrum. I had noticed that exposure to heat rays emanating from a source of low chemical activity, even when the temperature far exceeded the maximum ever recorded in the direct rays of the sun by a black bulb thermometer, never produced injurious results; whereas men working with powerful arc electric lights, such as are termed search-lights in the navy, constantly suffered from affections apparently identical with those caused by the direct solar rays, though the radiant heat emitted by these arcs was comparatively insignificant.

"I therefore concluded that sunstroke and sun-fever were not so much due to the heat of the sun as to the chemical power of its rays; and hence I argued if I treat myself as a sensitive plate, and envelop my body in any colour between yellow and ruby red, I should protect myself to the same degree as the photographer protects his plate. Since experiment showed that it was immaterial whether the yellow or red wrapping was placed inside or outside, and as it would have attracted a good deal of attention to have worn yellow clothing, even had the dress regulations of the service permitted it, which they did not, on landing I had all my clothes and hats lined with some cheap native material of a good orange hue.

"The experiment proved completely successful. During the next five years I was constantly exposed to the most intense heat. I had a hot season in Morar, another

in Lahore, and a third up at Quetta, and on one occasion I marched 600 miles across the Bikanir desert at the end of March in such intense heat that even my camels and their native attendants suffered.

"I soon found that it was only the yellow lining that saved me. Without it, and no matter what monstrosities in the way of pith hats and spinal pads I wore, I was just as susceptible as ever. My medical friends at first ridiculed the idea altogether, assuring me it was only the effects of imagination, and two of them were so convinced they were right that they removed the lining one day from my hat whilst I was at breakfast in the club. When I came out I took up the hat without suspecting that it had been tampered with, and set out to walk to my office, about four hundred yards away. It was then about 10 A.M. I only just managed to reach my destination, and a few minutes after became so bad that I had to send for the doctor, who happened to be one of the two in the secret, and who at once admitted he was mistaken.

"Since then I have tried the plan on many of my friends, and it has never failed. The material employed is of no consequence, only the colour. A brother officer employed on the Hurnai Railway at a time when the mercury had run off the thermometer, and even the flies had left, used some yellow paper in default of any better material, and found it answered equally well.

"When I left India the Government had directed experiments to be tried with helmets lined with orange; but I never heard what the results were. Since, however, far more injury is caused by the action of the sun on the body—i.e., through the liver and heart—than through the head, and the Government would not face the expense of lining the men's tunics (an expense rather less for a whole battalion than the cost of sending home one invalid and about one-tenth what it costs to replace him), I was not very sanguine that the sick list would be conspicuously reduced."

It seems that rays reflected from snow have special influence in promoting pigmentary changes in the skin.

Unna says (Selected Monographs on Dermatology, New Sydenham Soc., 1893, p. 118), in summing up the views of Aeby, Riehl, Erhmann, and others, that all observers are at least agreed in one point, that "pigment does not originate in the epidermis, but is transported thither from the cutis. Further, that in the lower epidermic strata, the pigment lies between the cells, and makes its way higher up into the cells themselves, where it collects especially at the distant pole of the nucleus." He further thinks "that the pigment reaches the interior of the cells along the channels by which the intra-cellular nerve filaments, described by him, are distributed."

This pigmentary deposit is then derived from the vessels, and there can be little doubt that it is an effort of nature to protect by colour the delicate nerves and vessels of the skin from further irritation. This irritation is excited in the first instance by the action of rays

of a certain kind on the living tissue, acting directly on the deep cells of the epidermis, and indirectly through them on the afferent and efferent vasomotor nerves; or they might act directly on the latter, and the deep cells of the epidermis be affected indirectly by the local congestion.

It seems that snails, slugs, lizards, and other animals assume darker colours the nearer they are to the snow; this accords with my observations as to the greater irritating effects of rays reflected from snow.

I was much struck in my winter visit to Davos by the extreme brownness of the skin of those who remained there; it was as though the skin had been coloured by walnut juice. I have several times visited those parts in summer also, but although the sun is much stronger, it by no means produces the same colouring of the skin, excepting on those who make excursions above the snow-line. Residing as I did at Folkestone, I had many opportunities of seeing travellers on their way to and from Davos and St. Moritz for winter residence, and the result is invariably the same. Connected with this subject is the brown colour of the chalets in the Higher Alps. My attention was first drawn to this by Dr. C. J. B. Williams, with whom I was discussing the cause of the brown colour of the skin.

The chalets in the less elevated regions, and which are less exposed to the snow, do not become brown, or only very little so; but as far as I have seen, and my experience is now considerable, they invariably do so amongst the snows. I have investigated this point with some care, and found that the parts of the chalets which are covered by the snow four or five feet from the ground, and the north sides, and those parts so shaded that no rays reflected from the snow could reach them, were of a dirty white colour, as were also the insides of the chalets and the shaded parts between the timbers.

In a few I found even the north sides brown, but then there was, near by, a bank sloping at such an angle that the sun's rays must necessarily be reflected from the snow on to the north side of the chalet. At Zermatt, Mürren, and Bel Alp are many illustrations of this interesting observation. There is yet another point of interest; invariably over the doorways of the cow chalets the timber is white, even where most exposed to the sun and snow. At first I wondered whether this was due to some chemical change produced by the

carbonic acid of the expired air of the animals, but I am disposed to explain the white colour by the constant presence of a very large amount of water vapour emanating from the upper part of the doorway, more than to the carbonic acid.

Since then, during my winter visits to the Alps, I have found that at that period of the year the water vapour over the doorways of cattle chalets was frozen on to the wood, forming a layer of ice or rime of varying thickness, and I supposed that the penetration of this by the light rays explained the phenomenon; but on scraping off the white surface it was found to be soft and moist and greenish underneath, suggesting some vegetable growth. Through the kindness of Dr. Oliver, Professor of Botany at University College, this was examined, and found to be full of micrococci and fungous growth both *between* and *in* the woody fibre, most of which had been deprived of its natural qualities and converted into pure cellulose; so that this whitened surface (cellulose) was the result of perhaps many causes—warmth, moisture, carbonic acid, light refracted by ice, and parasitic microbes and fungi.

As the direct rays of the sun pass through, and have but little heating power on the air itself, the air near the surface of the earth and rocks must be warmed by contact with the same, and then diffused around. On the glacier, on the other hand, the air in contact with the snow or ice can only be at or near thirty-two degrees Fahrenheit, as it gets no warmth from contact. The sloping sides of the glacier depend not only upon the greater amount of dust and dirt on that part of its surface, but also upon the air warmed by contact with the contiguous rocks, which, moreover, continue to radiate heat for some time after the sun has disappeared from the glacier. Dirt and dust on a glacier, when not too thick, by constantly absorbing and giving off heat to the ice around, cause rapid diminution of the ice, and little wells and basins are thus formed. This principle is utilized by the natives for hardening the snow-track or path from the Théodule hut to Breuil; dark earth is strewn upon the snow-path, and this, by absorbing heat, causes rapid melting of the snow beneath, which the nightly frosts render more dense, and thus travellers are saved during the warmth of the day from plunging deeply into the snow. In conclusion, then, I may state generally:—

First. That heat *quâ* heat is not the cause of sunburn.

Secondly. That there is strong evidence for believing that it is caused by the violet or ultra violet rays of light reflected from the snow, which reflected light is not necessarily of the same quality as that which is incident.

Thirdly. Captain Abney finds that the violet or ultra violet rays are very strong at high altitudes, and believes that altitude has much to do with sunburn.

Fourthly. That altitude alone does not explain sunburn, for one may be sunburnt on rocks, say, at 10,000 feet, and yet be immediately affected on descending to a glacier 3,000 or 4,000 feet lower down.

Fifthly. That sunburn and snow-blindness arise from similar causes, and that sunstroke may be associated with them.

Sixthly. That rays from the electric light produce much the same results as sun-rays reflected from snow.

Seventhly. That the bronzing of the skin and the browning of the wooden chalets are probably produced by rays reflected from snow.

The varied experiences just related would probably all be readily explained by a few simple physical laws—*e.g.*, glass is athermanous to the dark or long heat-rays which arrange themselves at the red end of the spectrum; but glass, on the other hand, transmits the light-rays, which are readily decomposed by objects on the farther side of it, and there degraded into long heat-rays, which are now radiated as sentient heat. This is well illustrated in a greenhouse. The light-rays are alone admitted through the glass, and practically *all* the energy in the house is degraded, and then radiated as long heat-rays from the earth and other objects within, which have been agents for the degradation of the "light energy" into the heat form. After a similar fashion the transparent epithelial layer of the fair skin will transmit the light-rays to the nerves, vessels, and other tissues immediately beneath; the light-rays would there be decomposed, and probably develop dark or long heat-rays, which would be sentient and excite in the very vessels themselves those primary actions which lead to inflammation and its consequences. Black skins, on the other hand, and various pigments, would absorb these light-rays and stop their transmission to those vital parts which may be excited to inflammatory action.

In reference to the singular but well authenticated fact that,

although feeling very cold, one may be more severely burnt on snow *in a mist* than in direct sunlight, we may take it that mist is nearly like glass, athermanous to dark heat-rays, and the explanation of the effects of the admission of light into a greenhouse may be here again applied to sunburn in a mist.

The foregoing observations and deductions must, of course, be taken in a wide and philosophic sense, and their relation to the many pathological conditions which may arise in the human body be decided by the physician and the surgeon. Mr. Jonathan Hutchinson has shown some very aggravated cases of what he calls "Summer Eruption,"* and he is disposed to attribute them to the irritating effects of the sun's rays, and in one of his later published lectures he refers to my views as giving a probable explanation of his cases.

Dr. Pringle has also very kindly shown me a case of this nature, and I ventured to suggest to him to apply freely grease paints as a means of prevention. If the sun's rays will produce sunburn, erythema, eczema solare, inflammation, and blistering, it is clearly capable of producing deep and intractable ulcerations of a low and chronic nature. It only requires a peculiar susceptibility in the individual, that unknown quantity, "idiosyncrasy," to allow the graver local changes to occur. The same may be said of the general conditions of sun exhaustion, sun fever, and sunstroke, illnesses due as much, perhaps, to the physical effects of the sun's rays as are the local or surface conditions, which lie more especially within the cognizance and province of the dermatologist.

* *Clin. Soc. Trans.*, Vol. XXII.

CURRENT LITERATURE.

THE THERAPEUTICS OF SKIN CANCER. Dr. OSCAR LASSAR. (*Berliner Klin: Wochenschrift*, 1893, No. 23.)

Dr. LASSAR's paper is one on the curability of skin cancer by the internal administration of arsenic. After referring to the benefit sometimes brought about by erysipelas he relates how it was he first came to use this method. A man, æt. 50, consulted him on account of three separate skin cancers, one of which had gone too far for operation. Arsenic was ordered and the condition of two of the tumours rapidly improved. One of them disappeared, the second skinned over, and the third was still increasing when the patient unfortunately died. A second case on the nose of an old woman apparently completely healed, but the patient had not been long under observation.

A third case was a woman aged 75. The tumour, the size of half a walnut, developed in *six or eight months*, and disappeared in less than two. A fourth case, the duration of which is not stated, disappeared in two months.

The fifth in a man, æt. 55, looked suspiciously specific, but treatment on these lines had no effect. This tumour was 5·5 cm. in circumference, 1·8 to 1·6 broad, and had appeared in *three months*. Its depth was 4 cm. to 5 cm. It was much improved in six weeks, and altogether disappeared.

The counsel of an authority to substitute any other remedy but the knife in the treatment of cancer should be very advisedly given, and very carefully considered, for the tendency for patients and many doctors is to persevere so long in any treatment rather than submit to the knife, that the disease advances beyond the reach of treatment.

The microscopic drawing from case one, the case which did not improve under treatment, is undoubtedly that of a rodent ulcer. Whether the other tumours from the same case which disappeared presented the same characters we are not informed, and presumably no examination was made.

The appearances in the drawing from case three are, in our opinion, not sufficiently pronounced to enable one to say definitely that it is epitheliomatous, while that from case five is even less distinctly epitheliomatous, and Lassar himself describes it as an atypical epithelial growth. Similar appearances to these last two preparations may be seen in many conditions, such as syphilitic, tubercular or even simple healing ulcers. They present atypical epithelial growth and nothing more.

Cases two and four were not microscopically examined.

A notable point is the rapidity with which the last four of these tumours grew—a rapidity which is unusual in true cancer of the skin when not near a mucous surface. The histories too are not sufficiently detailed. Even with the German disregard of history, we should consider it important to know whether there had

been any irritation, and what was its nature. The tumours on the skin of paraffin workers, distinctly epitheliomatous in structure, frequently disappear spontaneously, leaving a healthy scar. Spontaneous disappearance is, however, practically out of court in these cases. The coincidence would be too remarkable.

In view, however, of the very grave responsibility of recommending such a treatment one feels it a duty to point out that except in that case which did not improve we are not convinced of the cancerous nature of the growths. Other sections may have been more demonstrative, but if so they would probably have been selected for publication, and we will therefore be well advised in waiting for more definite information before recommending in the treatment of epithelioma or rodent ulcer any other remedy than the knife.

NORMAN WALKER.

A CASE OF CHRONIC GLANDERS TERMINATING FATALLY IN AN ACUTE EXACERBATION. Drs. H. HALLOPEAU and E. JEANSELME. (*Annales de Dermatol. et de Syph.*, 1893.)

THE authors give at the outset a cursory review of glanders occurring in man. Elliotson and Rayer were the first to establish direct infection. Alibert was apparently ignorant of its occurrence in man; English, American and German dermatologists allude to its manifestations, but with few exceptions have had no personal experience of the disease. The pathological and clinical aspects hitherto have been only lightly touched upon, and therefore the authors have given a full clinical, pathological and bacteriological account of the disease.

The patient, *ætat.* 80, a carter, was admitted to the Saint Louis Hospital in April, 1890, and gave the following history:—He had been a carter for the last six years. Some few months after having followed this occupation, one of his horses was taken ill, evidently with glanders, and in the course of three months had to be killed. It was then that the patient first complained of his symptoms. He suffered from general malaise, headache, periodic febrile attacks, pains in the joints, which were neither swollen nor red, and abundant nasal secretion. He was admitted to the hospital at Chalons-sur-Saône, and there he had several abscesses in various regions of the body; some of these healed spontaneously, others in spite of various applications remained open, discharging a viscous yellow fluid. Not getting any better after being a year in the hospital, he came to Paris and was admitted to the Saint Louis Hospital. Again various applications were tried (carbolic acid, boric acid, tincture of iodine, iodoform, aromatic spirits), but without result. Finally, under an anæsthetic, the thermo-cautery was vigorously applied, and in the course of a fortnight the patient left, considering himself cured. In fact he was able to work for the next three years without any fresh manifestation of glanders. In 1889 swellings again broke out, unconnected with the scars of the former abscesses, and in April he again came to Saint Louis Hospital.

Status præsens.—He complained of headache, pains in the ears and slight deafness. There was ulceration of the palate immediately behind the median incisors. He denied having ever had syphilis, but he was placed on an iodo-mercurial course, and mouth-washes of perchloride and chlorate of potassium were used alternately. No improvement followed; at the end of six weeks the ulceration implicated the gums and upper lip, and anti-syphilitic treatment was stopped.

The labial and gingival ulceration healed, but a sinus persisted in the palate.

During the next six months chronic inflammation of the right lachrymal sac supervened, and in October an abscess, the size of an egg, developed in the right flank, opening and healing spontaneously within three weeks.

The upper lip again became swollen and ulcerated, secreting a gummy yellowish fluid. The contiguous gum was spongy, pus exuded at the necks of the incisor teeth, which became loose and discoloured. The palatal ulceration extended as far as the velum palati. There was an ulcer at the neck of the uvula. The remainder of the buccal and pharyngeal mucosa was unaffected. The larynx was sound, and the voice, as in the past, was quite clear. The nasal fossæ were profoundly altered. The secretion was very abundant, yellowish, viscid, and streaked with blood; there was no ozæna. On examination the floor was swollen, and showed distinct ulceration, especially the mucosa of the right nostril, and a sinus led down to bare bone. The septum nasale was perforated, permitting the passage of a probe from one nostril into the other.

Mercurial treatment was again carried out, but in spite of prophylaxis, it aggravated the buccal and nasal ulcerations, and was consequently stopped. The thermo-cautery was now used with excellent effect: unfortunately, owing to the exquisite pain that persisted for some days, the labial ulcers could not be cauterized as effectually as the others. The general characters of the ulcerative process were as follows:—

The ulcers presented a punched-out aspect. The margin was sinuous in some places, dentate in others, but everywhere undermined. The surface was anfractuous, granular, covered with a yellowish viscid secretion through which yellow spots like pustules cropped out. The base was not indurated, and the surrounding area, although swollen, did not present the fibrous thickening of an epitheliomatous ulcer.

In December, 1889, a swelling of the size of a nut appeared in the right canine fossa; this was opened by the cautery, which gave vent to a yellowish viscid secretion. The patient suffered greatly from insomnia and sharp shooting pains in the head. During the following five months his condition deteriorated, the right side of his face was inflamed and showed scattered pustules of the size of a hemp-seed. The nostrils were plugged with fetid crusts; the palpebral conjunctivæ were bathed with a sero-purulent discharge; the ocular conjunctivæ remained unaffected; and the right eye was much the worse of the two. The ulceration of the upper lip had destroyed this completely, laying bare the gum, and in April, 1890, the lower lip was attacked.

Marasmus now set in; constant hectic, uncontrollable diarrhœa, fetid dejecta, slight jaundice, and albuminuria. Ascites supervened, and the patient sank May 21, 1890.

Three periods may be noted in the above case of glanders.

1. The increased nasal secretion and multiple abscess formation running a peculiar course. This period ended in freedom from any symptom for three years.

2. A second series of abscesses, accompanied by ulceration of the nasal fossæ, hard palate and lips.

3. An acute exacerbation of glanders with exitus lethalis. The diagnosis was surrounded with difficulties, and it was only after the signal failure of mercurial treatment on the two occasions, the absence of any signs of tuberculosis and of tubercle bacilli in the secretions, and careful consideration of the patient's history and occupation, that suspicion was aroused of its being a case of equinia.

Drs. Hallopeau and Jeanselme, by cultures and inoculation experiments on guinea-pigs and on an ass, proved conclusively that their patient was suffering from glanders.

The organisms are short rectilinear, or slightly curved, rods, thinner at their ends than in the middle, thicker than, but not quite so long as tubercle bacilli. The equinia bacilli were never found in masses, but either solitary or in groups of two in the neighbourhood of aggregation of leucocytes.

As regards the cultures, these when sown on potato presented an amber colour on the fourth day, becoming reddish-brown later on. In bouillon fine spiral filaments appeared the following day after insemination.

In the experiments on guinea-pigs, all of which succumbed to equinia, it was found that in males, when the peritoneum was injected with the virus, suppuration of the tunica vaginalis testis invariably followed, which was not always the case when the skin was the site of inoculation.

The ass showed signs of equinia after being inoculated with cultures derived from potato-media.

The authors draw the following conclusions from their study of the above case:—

1. Chronic glanders may last as long as six years, and this is not exceptional.
2. The disease may remain quiescent and, contrary to Tardieu's observation, as long as three years.
3. Glanders should be suspected after a series of multiple abscesses—subcutaneous or intra-muscular—and in the presence of ulceration of the nasal fossæ, of the buccal mucosa, of the velum palati, and painful swelling of the lacrymal sacs with purulent discharge from the nostrils.
4. The swellings—farcy buds—may discharge and heal spontaneously: the latter is rare. Sinuses that persist would seem to preserve indefinitely the property of transmitting equinia—at least inoculation experiments prove this.
5. The specific ulceration has a predilection for the buccal and nasal mucosæ: in the above case it attacked the lips—the first on record.
6. These ulcers resulted from the breaking down of gummy swellings; they were not consecutive to abscesses, as Tardieu has stated, and no suppuration occurred in the tissues of the lips.
7. They differed from syphilitic ulcers, in presenting irregular undermined margins, anfractuous bases studded with yellowish prominences, abundant viscid secretion—farcy oil—and in their resistance to anti-syphilitic treatment. Their course is phagedenic in nature, and hideous deformity often results.
8. The acute fatal exacerbation may start from the nasal fossæ spreading along the nasal ducts, analogous to severe erysipelas.
9. From erysipelas glanders differs in the absence of glandular enlargement, and in the presence of profound destruction of tissues accompanied by formation of pustules.
10. The acute attack may last as long as forty days.
11. The secretions of the labial and nasal ulcers, and especially that of the conjunctiva, are exceedingly virulent. The urine of the patient during the acute exacerbation of equinia gave negative results on inoculation.
12. In all the secretions—both of the patient and of the animals—the specific glanders bacillus was present, either alone or with other micro-organisms (*staphylococci*).
13. To facilitate diagnosis, cultivations should be made on potatoes, which

assume in a few days a reddish-brown colour. Peritoneal inoculations in male guinea-pigs are followed in forty-eight hours by characteristic suppuration of the tunica vaginalis testis.

14. The only efficacious treatment is cauterization with Paquelin's cautery, systematically and thoroughly carried out.

FRANK H. BARENDT.

SKIN AFFECTIONS CAUSED BY ARSENIC. Dr. C. RASCH, of Copenhagen. (*Annales de Dermatologie et de Syphiligraphie*, T. IV., 1898.)

AFTER referring to the vague statements made with regard to arsenical eruptions and to the want of exact observations, the author details two cases, the first occurring in a woman, aged 63. There was a generalized dermatitis, following upon influenza, for which she underwent prolonged treatment with arsenic. This was followed by a gangrenous form of zoster, a generalized pustular erythematous eruption, which, rapidly ulcerating, left pigmented cicatrices, and palmar keratosis on both hands, combined with the gastric and nervous symptoms of chronic arsenical poisoning. There was no syphilitic history. The second case was that of a man, 35 years of age, suffering from phthisis. After taking nine drops of Fowler's solution for two days, an acute bullous eruption broke out on various parts of the body, the size of the bullæ varying from the size of a pea to that of a hen's egg. It did not attack the mucous surfaces, neither was there any febrile condition. On stopping the administration of arsenic the eruption gradually disappeared. The patient died some time afterwards without any fresh eruption having appeared.

The remainder of the paper is taken up in reviewing the literature of various arsenical skin affections, and a collection is made of a number of cases that have been published, which is, however, by no means complete.

H. W. MARETT TIMS.

CLINICAL OBSERVATIONS ON GALLANOL IN PSORIASIS AND ECZEMA.

PAUL CAZENEUVE and ETIENNE ROLLET. (*Extrait du Lyon Médical*, 1898.)

REFERRING to the various substances which have been recommended in the treatment of eczema and psoriasis, and pointing out the ill-effects which may result from their use, especially in relation to chrysophanic and pyrogallie acids, as exemplified by a case in which conjunctivitis and dermatitis followed upon the use of the former acid in psoriasis, the authors set themselves to work to find out a substance chemically allied to these but without any of their untoward effects. This they claim for gallanol, which is a purified form of gallol, known to commerce.

Four grammes of this substance given to a dog, or two grammes to a man, or some introduced into the eye of a rabbit, produced no bad effects whatever.

Directions are given for its preparation, and cases are detailed of psoriasis and of eczema, in both its acute and chronic forms, in which the use of this substance appears to have been followed by markedly good results.

It may be used as a powder, an ointment with vaseline in the proportions of one to four, ten, or thirty, or as a pigment mixed with chloroform or alcohol and covered over with traumaticin.

H. W. MARETT TIMS.

THERAPEUTIC NOTES.

FORMULÆ FOR EMPLOYING ALUMNOL. (*Berlin. Klin. Wochensch.* No. 48, 1892.)

DR. M. CHOTZER recommends the following methods of applying this new remedy, some mention of which was made in a recent number of this journal.

(1) *Pure Alumnol*, for chaneroids, erosions, and abscesses. (2) *Alumnol dusting powder*, 10-20 per cent., with equal parts of talc and starch, for balanitis, weeping eczema, and burns of the first degree. (3) *Alumnol solutions*, 1-5 per cent., for copiously discharging eczema, pustular eczema, facial acne, furunculosis, glandular swellings, and urethral discharges, whether due to gonococcus or not. (4) *Alumnol spirit*, $2\frac{1}{2}$ per cent., for the after treatment of eczema, post-scabietic dermatitis, urticaria, sycosis, and psoriasis on the scalp or face. After evaporation of the alcohol, rendered bluish by the alumnol, a white precipitate remains, giving the appearance of powdering. (5) *Alumnol-lanolin-ointment*, $2\frac{1}{2}$ -5 or 10-20 per cent.

(a) R. Alumnol	10.
Lanolin anhydr.	50.
Paraffin liquid	85.
Ceresini	5.

Useful in eczema, seborrhœa, capitis, psoriasis, favus.

(β) R. Alumnol	0·5 (1·0).
Aq. distill.	1·5 (1·0).
Glycerini	8.
Ung. lanolin	15.

For injection in gonorrhœa.

(6.) *Alumnol varnishes.* (a) *Alumnol-salep-bassorin.*

R. Tuber. salep	10.
Glycerini	20.
Aq. distill.	200, coque usque ad consistentem
unguenti et adde Alumnol	20.

(β.) *Alumnol-salep-tragacanth-bassorin.*

R. Alumnol	10.
Tragac. Bassorin	50.
Salep. Bassorin	50.

Useful for moderately discharging eczema. Both varnishes dry, when applied in thin layers, in about twenty minutes, and adhere well for two or three days.

(Tragacanth-bassorin is prepared by rubbing up a gramme of tragacanth with alcohol, and afterwards boiling down with fifty grammes of glycerine, to the consistence of a salve.)

(c) Alummol-shellac-varnish.

R. Shellac in tabula	50.
Ol. Ricini	10.
Alummol	20.
Spiritus	150.

(d) Alummol-plumbic-ricinoleat-varnish.

R. Plumbi ricinoleat	40.
Alcohol absolut.	80.
Alummol	12.

Recommended in slightly infiltrated, papular, and squamous eczema. It is recommended, about twenty minutes after the application of the ricinoleate of lead varnish, to cover the part with a thin layer of wool. (Ricinoleate of lead is obtained by boiling one part of oxide of lead with one and a half of castor-oil.)

Various other formulæ are given for varnishes in combination with collodion, Canada balsam, traumaticin and guttapercha.

(7.) *Alummol-guttapercha-plaster-mull*, 5-50 per cent., for use in eczema, erythema exudativum, prurigo, psoriasis, lupus, furuncles and epididymitis.

(8.) *Alummol-mercury-guttapercha-plaster* contains 17·5 mercury and 20 per cent. alummol to the square metre. It is especially effectual in erysipelas and in hard, sclerotic syphilitic eruptions which have granulated over.

THE TREATMENT OF BOILS BY BORIC ACID. (*Therap. Gazette*, Feb. 15, 1898.)

L'Union Médicale quotes Alison as having obtained good results in cases of general furunculosis by the administration, for eight or ten days, of 10 to 15 grains of boric acid a day, divided into two doses. At the same time, four or five times a day, the inflamed areas were washed with a hot 4 per cent. solution of boric acid. Between the applications of this lotion compresses were applied to the diseased parts, which had been wet with the same solution of boric acid. In this way he claimed to have been able to relieve the boils which had already formed, and to do much towards preventing other outbreaks, often obviating the necessity for surgical interference.

A DUSTING POWDER FOR PAINFUL, DISCHARGING ULCERS. (*Therap. Monatsh.*, January, 1898.)

WEISMÜLER recommends the following formula :—

R Acid Salicylic	partes	8.
Acid Boric	"	4.
Zinci oxidi	"	8.
Amyli	"	
Talci pulv.	aa	80.

LOTION FOR PRURITUS VULVÆ (*Therap. Monatsh.*, January 7, 1893.)

MEISEL finds the following often useful in this most obstinate complaint :—

R. Potass. Bromid.	partes	2.
Lupulin	"	2.
Hydrar. Chlorat.	"	10.
Ol. Olivæ	"	80.

Sig. For external application—must be well shaken.

EUROPHEN. (*Therap. Monatsh.*, January, 1893)

IN an article intended for the Scientific Congress held in Nuremberg in 1892, Dr. Eichhoff of Elberfeld communicates the results of his further experience with euprophen, comparing them more especially with the effects of iodoform. Used subcutaneously in syphilis it proved disappointing, and relapses frequently occurred, but as a local application to secondary lesions, especially to flat condylomata, it proved very beneficial. Under its use soft chancres rapidly clean and cicatrize, but where granulations are exuberant and project above the level of the surrounding skin, they must first be destroyed with lunar caustic. He warmly recommends its employment as a dusting powder in simple ulcers of the legs, the parts being previously washed with a 3 per cent. carbolic solution; they are then covered with gauze and a firm bandage applied. According to the amount of secretion this dressing is changed daily, or every two days. In five cases of scrofuloderma, and seven cases of lupus, rapid cicatrization of ulcerating surfaces took place, but the writer does not assert that cure resulted. He reiterates his previously expressed opinion, that in addition to more rapid healing power than iodoform, it has the dual advantage over that drug of freedom from odour and absence of risk of intoxication.

EUROPHEN IN LEPROSY. (*Therap. Monatsh.*, April, 1893.)

DR. JULIUS GOLDSCHMIDT, of Madeira, reports five cases of leprosy treated with subcutaneous injections or inunctions of a 5 per cent. euprophen solution in oil. The result in four cases was negative, but in the fifth, remarkable improvement—if not actual cure—was obtained after fifteen months' treatment. Notable improvement was observed four weeks after the beginning of the treatment, which consisted in the gentle inunction of the solution into the infiltrated parts three times daily. During the course of treatment the patient gave birth to a healthy child. At its termination no bacilli could be found in parts where their presence had previously been determined, and the patient was apparently in perfect health. Throughout the twenty-five years of his leprosy experience Dr. Goldschmidt had never seen anything approaching such a result. He selected euprophen as a remedy containing iodine easily set free, and suggests that possibly other iodine compounds may prove equally efficacious.

THE BRITISH JOURNAL OF DERMATOLOGY.

SEPTEMBER, 1898.

THE TREATMENT OF CERTAIN SKIN AFFECTIONS BY THYROID FEEDING.

BY ARTHUR T. DAVIES, M.D., M.R.C.P.,

Physician to the Royal Hospital for Diseases of the Chest (London), &c.

*(Read in the Dermatological Section of the British Medical Association,
Newcastle-on-Tyne, August 2nd, 1898.)*

It is now a well-known fact, that when the thyroid gland is administered in myxœdema, one of the chief changes observable is that the skin and its secreting glands regain their normal condition and functions, and that concurrently there is a growth of new hair. As an instance of the influence of the thyroid gland over the condition of the skin, the following case may be cited. A woman, age 59, was shewn by Dr. F. J. Smith at the Hunterian Society on April 12th, 1898, who had suffered from myxœdema. She accidentally took ten thyroid glands at one sitting: *acute dermatitis* ensued, accompanied by the exudation of a peculiar sticky secretion, saturating the skin, and subsequently entire peeling of the hands took place. It had occurred independently to Dr. Byrom Bramwell, that in such a diseased condition of the skin as psoriasis, the administration of the thyroid extract would probably prove of benefit, and in one case which was shewn at the meeting of the Edinburgh Medico-Chirurgical Society, on February 15th, 1898, he obtained very satisfactory results with this treatment. The following four cases, which I have treated in this way tend, I consider, to further confirm the value of this

method. In each instance I used the tabloids of thyroid extract as prepared by Messrs. Burroughs and Wellcome.

(1.) F. B., age 32, blacksmith, came under my care on February 27th, 1898, as an out-patient. He complained of a skin eruption, which had begun three weeks previously on his left arm, and attacked successively his left leg, right arm, right leg, and trunk. The rash was an ordinary one of psoriasis, the eruption being most marked on the legs. I put him on one thyroid tabloid a day, and immediately there set in a steady improvement. The diseased skin fell off, then ceased to do so, and was replaced by permanent healthy tissue, and in eight weeks the patient was cured. Before giving the tabloids, he had a simple alkaline tonic for a fortnight, which had no effect as regards the skin condition. This was stopped when the tabloids were given: no relapse has occurred. The patient remarked to me that he felt much more active.

(2.) J. E., age 16, an out-patient for bronchitis. He had well-marked psoriasis of three years' duration. He had for some time arsenic internally and chrysophanic acid externally, which improved him up to a certain point. In April, he began taking the thyroid tabloids, one a day, and there has been a much more marked and steady improvement, so that I discontinued the arsenic and chrysophanic acid. He has taken the tabloids for three months, and is now practically cured. It was remarkable how rapidly the eruption vanished on the arms. The legs have been longer in losing it.

(3.) Emma E., age 48, married, also had bronchitis. She presented an universal xerodermatous condition, which on the extensor surface of the knees passed into a marked condition of ichthyosis. The disease is congenital, and she states that her mother and one maternal uncle suffered from it, and that her two eldest children are similarly affected. She took a thyroid tabloid each day, and within one month very marked improvement was visible. The excessive desquamation was more marked at first, and then began to cease; the skin concurrently began to assume a more natural condition, so that the patient has almost entirely lost her xerodermatous condition, whilst the ichthyotic state has disappeared. She states that there came off her knees pieces like small bricks. Perspiration has become marked in the face and head.

(4.) E. B., age 59, has suffered from chronic eczema for twelve

years with acute exacerbations. She has been under my care for seven years. In her last acute attack I began giving her the thyroid tabloids, one each night, in conjunction with the other remedies used. In a month she made rapid progress, the patient herself remarking how much quicker she had got better than she had ever previously done. The irritable moist condition of skin passed away, being replaced by delicate new tissue. She has now taken the thyroid tabloids for three months.

The above cases tend, I think, to shew that in the thyroid extract we have a therapeutic agent of some value in various skin affections. I do not in any sense consider it as a *specific*, but regard it only in the light of having a powerful effect in altering the condition of the skin, and in laying, as it were, the foundation for a better and healthier state. Therefore one would expect, that in cases of psoriasis of short duration it could *alone* effect an improved condition of affairs, but that in cases of longer duration, its value lies in *assisting* the action of the remedies used. On the other hand, I must point out that even in such chronic cases as I have related, it is not improbable that my results might have been more marked if I had used still larger doses of the drug.

A CASE OF SEBORRHOEA PSORIASIFORMIS.

BY STEWART STIRLING, M.D.,
Edinburgh.

*(Read in the Dermatological Section of the British Medical Association,
Newcastle-on-Tyne, August 8rd, 1898.)*

THE case was one of the more uncommon forms of the seborrhœic process, simulating psoriasis and syphilis, and would naturally, according to Unna, have been included in his large group of dermatoses called *eczema seborrhoicum*.

The patient, a young man 27 years of age, was first seen by me in July, 1892, at the Edinburgh Skin Dispensary. The history was that the rash had been present for two years. It commenced by a few small reddish, slightly itchy spots about the size of herring scales over the breast-bone, followed after a year by fresh spots on the back, between the shoulders, and in the axillæ. Four months later, after an attack of pleurisy, the eruption came out more abundantly over the thorax and arms—a few spots appearing at the same time on the forehead near the border of the hair, and on the thighs. The patient had had no form of skin affection previously, except a profuse “dandruff” which had existed for many years. There was no family history of skin disease. His case had been pronounced on several occasions to be syphilitic, but he denied ever having had syphilis.

The eruption, as examined by me in July 1892, consisted of numerous round, oval, and irregular spots or patches—coalescing somewhat—of a dusky-red or raw-ham colour, varying in size from a pin’s head to half an inch in diameter, densely distributed over the trunk and arms, especially on the front and back of the chest and in the axillæ. The larger patches were well-defined, slightly raised, hyperæmic, and thinly covered with soft, loosely adherent grayish-white scales. The smaller spots gave a rough impression to the finger, and looked like stains on the skin. A few dull red, greasy

spots were present on the forehead near the margin of the scalp, and some isolated spots were observed on the thighs and legs. There was a tendency to grouping and to symmetrical arrangement. A few of the lesions here and there, especially on the arms and upper part of the back, had a distinctly yellowish tinge. On a hasty inspection of the eruption, the first impression was that of a papulo-squamous syphilide, but on a minuter examination of the eruption, and of the patient, there were found no syphilitic manifestations, and absolutely no specific history. Syphilis having been excluded, psoriasis suggested itself; but there was the absence of the usual localization of psoriasis on the elbows, knees and scalp; and the presence of dusky-red patches topped with soft grayish-white scales, contrasted with the brighter-red colour, and the dry silvery-white scales of ordinary psoriasis. There were also diffuse dry seborrhœa of the scalp, and hyperactivity of the sweat-glands of the body, and lastly, the eruption was attended with itching which had become more severe, and which was worst at night.

The treatment was, at first, not quite satisfactory, the eruption proving very obstinate and showing a constant tendency to recurrence. Under both arsenic alone, and Donovan's solution, the number of spots increased. Perchloride of mercury had no apparent effect. Of the local remedies employed, Hebra's spiritus saponatus alkalinus for the scalp, and a strong ointment of resorcin and sulphur precipitate for the body, were found to be the most efficacious. The resorcin was suspended sometimes because of its irritating effect upon the skin, and replaced by mild tarry applications. While the lesions were clearing up there was a tendency to the formation of ringed patches. After treatment for two months and a half, the eruption had almost entirely disappeared, leaving no evident stains, and the patient discontinued his attendance at the Dispensary.

After an absence of five months the patient presented himself again, in February 1893. The disease had recurred, but in a somewhat altered form. Again there was well-marked seborrhœa of the head, and the rash had assumed a new phase, both as to its distribution and the character of the individual lesions. The lesions now occupied the lower half of the trunk, especially the sacral region and the abdomen, extending upwards on the thorax towards the

axillæ. The face, arms, and front of the chest were unaffected, and only a few scattered spots were present on the upper half of the back. Several spots were located about the thighs; but on the legs—especially the calves—there were numerous patches and a few larger areas from the coalescence of smaller patches. These last presented a deeper-red colour than the rest of the eruption. The individual lesions on the trunk consisted of round or oval, circumscribed, slightly elevated, crimson-coloured patches, with pale yellowish borders. They varied in size from a split pea to three-quarters of an inch in diameter, and had a tendency to coalesce. The smaller spots had the appearance of stains and were not perceptibly raised. The patches were covered with thin, grayish, fatty scales, again contrasting with the dry silvery-white scales of psoriasis. It would thus almost appear that from the brighter-red or crimson colour, and the more uniform shape of the patches, the disease had in its progress gradually acquired a greater resemblance to true psoriasis.

With regard to the treatment of this relapsed, or progressive stage, after several unsuccessful attempts with resorcin, sulphur and tar, the disease yielded to an ointment of chrysarobin, tar and mercury for the trunk, and a varnish of chrysarobin with traumaticin for the legs. The seborrhœa of the scalp was treated with Hebra's "spiritus saponatus alkalinus." The chrysarobin treatment had to be suspended occasionally, on account of the painful erythematous eruptions it caused on the trunk. Arsenic was tried again, but it aggravated the disease. Under the chrysarobin treatment the patches gradually cleared up, those over the sacrum forming rings and segments, leaving yellowish stains which soon disappeared.

The differential diagnosis of this case is founded entirely upon its clinical aspects. It is quite beyond the scope of this short paper to enter into the subject of the pathology of the seborrhœic processes, which has been elaborately investigated by several distinguished dermatologists, *e.g.*, Unna, Duhring, and more recently by Dr. George T. Elliot of New York.

While the patient was under observation it appeared to me that he presented an amalgamation of symptoms which I had not seen before, and on referring to the literature of the subject I was unable to discover any reported cases which exactly (or very nearly) corresponded with the one under consideration.

The interesting cases described by Drs. Brooke and Wickham in the *British Journal of Dermatology* for 1889 and 1891 respectively—although evidently closely related—presented important points of difference in their clinical features. I had no difficulty in my mind in excluding from the diagnosis syphilis and true psoriasis, and of associating the lesions found on the body with antecedent and co-existing seborrhœic manifestations. Although accepting to a great extent Unna's description of seborrhœic eczema, I confess that after careful and prolonged study I was constrained to abandon that view of the case, as I had failed to discover any of the eczematous manifestations believed by dermatologists to constitute part of the process. All these were conspicuous by their absence. There was no marked infiltration of the skin, no tendency to the formation of vesicles or papules, and the "disposition to respond to irritation by exudation"—one of the features by which Unna defines eczema—was absent. In conclusion, I beg to suggest that the phase of disease presented in this case, from its mode of evolution and subsequent behaviour—especially under treatment—and from its general symptoms, indicates,—

1. An inflammatory process or dermatitis, simulating psoriasis.
2. That it owes its origin to the seborrhœic conditions of the skin—especially the head.
3. That it is probably parasitic.

NOTE ON TUBERCULOUS ECZEMA.

BY ALFRED EDDOWES, M.D.,

*London.**(Read in the Dermatological Section of the British Medical Association,
Newcastle-on-Tyne, August 4, 1898.)*

UNNA first called attention to this type of eczema in 1884 (*Deutsch. Med. Zeit.*, 1884, Nos. 43-47). Since that date he has several times written on the subject, yet, so far as I am aware, little notice has been taken of it, especially in this country. Those who do not care to read his original papers in German, I would refer to his address "On the Employment of Tuberculin in the Treatment of Lupus," read in Hamburg in 1891, translated and published in Nos. 32 and 33, Vol. III. of the *British Journal of Dermatology*. There he makes his case good, I think, that a tubercular eczema exists. The disease which he describes is, however, a very acute and serious affection, and one which I have seldom seen, probably for the reason which he gives, viz., that the eyes, nose, or ear affections accompanying the skin trouble so overshadow the latter that these cases seek the advice of other specialists before the dermatologist.

What I wish now specially to draw attention to is the existence of less acute and quite chronic forms of eczema, due, in my opinion, as certainly to the tubercle bacillus as lupus itself.

It is found alone as a distinct lesion, or on the same patients who exhibit typical lupus vulgaris, is mixed up with lupus patches, and appears to pass into lupus. In fact, I feel much disposed to suggest the term "tuberculosis of the epidermis" for it, and "tuberculosis of the true skin" for lupus vulgaris.

It was my intention to have read the notes of three cases, but as time is so pressing I propose only to describe one, and that briefly.

The case is still attending Dr. Dawson Williams' clinic at Shadwell under my care, and I am indebted to him for permission to publish it.

The case has already been shown to many members of the profession. The patient, a little girl, came to me suffering from photophobia of the right eye. She had conjunctivitis with phlyctenulæ in that eye. Around the eye and covering nearly the whole of the right cheek was what I consider quite a characteristic tubercular eczema. On her right wrist (back and radial aspect) was a patch about the size of a crown-piece of verrucose lupus, with perfectly typical Hutchinson's apple-jelly centres of degeneration. On her right elbow tip was a patch, quite circular, the size of half-a-crown, of dry, red, exfoliating, or rather coarsely desquamating eczema, much like that on the face. All these lesions are said to have existed four-and-a-half years. The eczema on the cheek was red, dry, somewhat harsh and firm to the touch, coarsely desquamating, and remarkable for the absence of itching, and for its fixed character and chronicity. I suspected it was tubercular even before I observed the affection of the wrist. Now the lupus of the wrist was, as I said, quite unmistakable, and it was a most significant fact that I saw the little patient steadying her right upper eyelid and shading her eye with the very portion of the wrist corresponding to the central part of the lupus patch.

The eye is now quite well and the eczema has completely disappeared, leaving no clear traces of disease, but, on the contrary, a beautifully clear complexion. There remains only a slight trace of ptosis, which is, I think, due to a want of muscular tone, and to a degree of inelasticity of the skin left by the eczema. The wrist is still under treatment. It has greatly improved under sulphur and zinc alternately with salicylic acid and tar.

During the application of sulphur and zinc ointment (3ss of sulphur to 3j of zinc ointment) I observed a curious reaction. Not only did the patch and its satellites swell up somewhat after the manner of the tuberculin reaction, but points unobserved before took on the same activity. This subsided without the discontinuance of the application which caused it, and then presented what I consider the typical red, somewhat roughly desquamating, non-itching surface of what I suggest we term "chronic tuberculous eczema." It is of great practical importance that we should recognize the existence of the affection, which is by no means rare.

[For the ensuing discussion see page 289.]

DERMATOLOGY AT THE MEETING OF THE BRITISH MEDICAL ASSOCIATION.

HELD AT NEWCASTLE-ON-TYNE, AUGUST 1ST TO 4TH, 1893.

THE institution of a separate Section of the British Medical Association for Dermatology was again fully vindicated, although it cannot, in candour, be said that its success equalled that obtained at Birmingham in 1890. The responsibility in no way rests with the President, Dr. Allan Jamieson, whose courtesy and firmness in the chair were of infinite service, and whose nomination was in every sense an admirable and appropriate one; nor with the Vice-Presidents, Dr. Thin and Dr. Colcott Fox, whose direction of the proceedings in the occasional unavoidable absence of the President, left nothing to be desired, while the guiding and controlling influence they exercised in all the debates was of the utmost value; nor with the Honorary Secretaries, Dr. Abraham and Dr. Rutherford, who were indefatigable in their exertions, and entirely successful in their organization of the proceedings.

The subjects selected for discussion were—(1), The Treatment of Chronic Ringworm of the Scalp, introduced by Dr. Colcott Fox; (2), The Etiology and Treatment of Psoriasis, introduced by Dr. Radcliffe Crocker; and (3), The Nature and Treatment of Lupus and Lupus Erythematosus, introduced by Mr. Jonathan Hutchinson. It was a matter for the greatest regret that Mr. Hutchinson did not put in an appearance to support his special views on the question announced, as doubtless an interesting debate would have ensued; in his absence the lupus discussion was rather a "scratch performance," albeit many interesting and novel points were raised in its course. Presumably the other subjects were selected for the benefit of the body of general practitioners, whose experience, especially upon the treatment of ringworm could not fail to have been of the greatest value, and it is a matter of regret that so small a number were present to hear

the admirable and exhaustive manner in which both were introduced, although upon neither problem was it possible to throw any new light, the reporters being compelled by force of circumstances to fall back upon a full epitome of what is already known, with expressions of personal preference for well-known methods and opinions.

The exhibition of Mons. Sabouraud's cultures of various forms of trichophyton aroused much interest, and it is evident that considerable discussion will in the future turn upon them, while they will probably prove to be stimulants to much further investigation.

The papers which, in addition to those mentioned, may, without invidiousness, be referred to as having excited the most lively interest were the contributions of Dr. Byrom Bramwell and Dr. Arthur Davies on the Treatment of Psoriasis by Thyroid extracts; and Dr. Colcott Fox's contribution on the subject, new to this country, of Erythème Induré des Scrofuleux of Bazin. The exhibition in the Museum, by various members, of water-colour drawings, was also of the highest importance and instructive value; its effect ought to be to impel dermatologists to have such delineations made of all rare or anomalous cases coming under their observation, while it revealed the fact that the number of excellent artists in this department is by no means confined to the Metropolis.

Last, but by no means least, must be mentioned Dr. Norman Walker's thoroughly admirable demonstration of rodent ulcer and other forms of skin cancer, illustrated by numerous sections and lantern slides. We are inclined to consider Dr. Walker's observations as inaugurating a new epoch and introducing a new precision in our knowledge of malignant cutaneous growths.

The opening day (August 1st) was devoted to meetings connected with the general business of the Association, which do not here concern us.

On August 2nd, the proceedings in the Section devoted to Dermatology commenced shortly after 10 o'clock with the introductory address of the President, Dr. W. Allan Jamieson (Edinburgh). In welcoming the members of the British Medical Association present, the President referred to the honour paid to him in being elected to the chair, as a tribute to his native country and to the memory of the late Professor Hughes Bennett. For the branch of dermatology he claimed that if its rights to separate recognition were to be estimated

by the area implicated, they could point to an extent of territory unequalled by any other region, the brain and nervous system regarded macroscopically, hardly perhaps excepted. Or if the amount of literature were to be the measure, that of skin diseases would compare favourably with any branch of medicine. In dealing with the subjects chosen for discussion, he remarked that ringworm and psoriasis were of common occurrence; while lupus erythematosus was sufficiently frequent, and lupus vulgaris was fairly prevalent everywhere. These topics would be introduced to notice by men eminently well suited to speak authoritatively on each. Taking the diseases named in order, it was found that in chronic ringworm the scalp or the soil occupied an all-important place. The disease, as a rule, was met with in children from shortly after infancy to puberty, after which, in most cases, even though untreated, it seemed spontaneously to get well. This was the period during which the sebaceous glands of the scalp, if not most active, were at least most liable to disturbance of function. It happened that chronic ringworm in which the hair grew fairly well over the affected area, was often mistaken for an ordinary example of dandruff. The seborrhœic element must also be recognized in a considerable proportion of instances of psoriasis. According to Nielssen, of Copenhagen, psoriasis began in most cases before the age of 14, showing a peculiar susceptibility of the integument to this complaint antecedent to puberty. Again, alcoholism, which favoured materially the development of the seborrhœic condition, not only aggravated psoriasis, but induced the development of a worse type of the disease. Lupus erythematosus was also associated with disordered sebaceous function, though it was agreed that the special inflammatory process by which objective symptoms were revealed, did not necessarily start from the sebaceous glands. As regards remedies there were at least three more or less beneficial in their action on all alike. These were sulphur, chrysarobin, and pyrogalllic acid. They had the power to affect the soil. The care of the latter as regards retaining the fertility of the extensive flora dermatologica, was a factor which, it was to be hoped, would not be wholly omitted in the discussions.

Dr. Colcott Fox (London) opened a discussion upon the Treatment of Chronic Ringworm of the Scalp. His observations may be epitomized as follows:—

The special difficulties met with in curing chronic ringworm of the scalp are due chiefly to *the situation of the fungus, the anatomical structure of the follicle, and the character of the soil or culture medium*. The fungus finds a specially favourable soil in the intrafollicular portion of the deeply imbedded hairs, and often spreads beyond the keratinized cells to the more succulent parts and to the bulb itself. It fills the space between the hair and its internal root-sheath, and occasionally involves the latter structure. According to some observers, it may even reach the corium, and the analogy of the favus fungus lends some support to this view. The structure of the follicle with its constricted neck, filled by the hair and epithelial and sebaceous debris, interferes with the penetration of remedies, whilst the growth of the hair continually tends to frustrate our efforts by supplying fresh pastures for the fungus, and by forcing the older parts to the surface. Thirdly, the fungus is very tenacious of life in this situation from one cause or another not yet fully understood. How far the tenacity is dependent on the species or variety of fungus, or on the quality of the soil, such as keratinization, succulence, &c., is not clear. The treatment is more difficult to conduct in delicate and unhealthy children, but the author had not found such patients, nor fair-haired children, specially prone to attack. Ringworm children, moreover, are apt after a time to deteriorate somewhat in health. We can only to a very limited extent, and in special cases, by hygienic or dietetic means, or the administration of medicines so change the soil as to affect the growth of the fungus.

Except for our knowledge of the fungus, and the more rational and precise use of remedies, no great advance in treatment had been made since the beginning of the century. Local remedies could conveniently be considered under three heads, *Mechanical, Parasiticial, and Irritative*. These methods were all very old, and the various effects were often brought about by the use of one remedy. Nevertheless it was important for rational treatment to clearly distinguish these effects.

Under the head of *mechanical* treatment the importance of epilation was considered, and the various methods of carrying it out, by forceps extraction, by the thumb and a spatula, by adhesive applications which entangle the hair, and by the induction of inflammatory processes were discussed. To be of use, epilation must be effected

under one of three conditions, (1) either before the hairs have reached a certain stage of disintegration or, (2) when, under the effects of treatment, they have recovered to some extent their consistence, or (3) when they are so loosened by inflammatory exudation that very slight traction removes them. Malcolm Morris claimed that the hairs could be made to fall after the removal of fat by the continued application of etherized or spirituous applications. In certain cases an alopecia areata set in, but the production of this process could not be effected at will. Quinquaud's "rugination" promised to be very useful. Depilatories did no more practically than shaving.

The *parasiticial* treatment was then discussed, and the question was asked whether it was possible by means of energetic applications and with the assistance of such media as benzine, turpentine, alcohol, ether, chloroform, animal and vegetable fats, &c., to make the parasiticides penetrate and get them in intimate contact with the fungus in the depths of the hair and follicle? If so, was it possible under these conditions to kill the parasite? Dr. Fox was not prepared to accept Besnier's dictum in its entirety, because from one cause or another, either by sterilization of soil, or parasiticial effects, or interference with the production of the hair, the ringworm was eventually cured. Still the purely parasiticial treatment was a slow means of cure.

Lastly, the *irritative treatment* was dealt with. Every one was acquainted with the happy results sometimes induced by the production of inflammation. The growth of the fungus set up varying degrees of irritation, and sometimes brought about its own cure. At other times the application of irritants had the happiest effects, and caused a rapid falling of the hair and a perfect and speedy recovery. The author had attempted for years to command this result, but unfortunately it was impossible to set up in every case the desired process at will.

Shaving the scalp, where practicable, was strongly recommended if carried out under due antiseptic precautions. It was cleanly, removed all the disease for the time being above ground, prevented contagion, and had a good moral effect.

Washing was also advocated, not for parasiticial, but for cleansing purposes, and to prevent contagion. He used soft or some medicinal soap according to the character of the scalp to be dealt with.

These introductory remarks were brought to a conclusion by a brief recital of the author's plan of treatment. He proceeded at the outset by the application of some simple parasiticide of moderate irritative qualities to acquire as definite a knowledge as possible of the tenacity of the ringworm and of the reactive qualities of the scalp. The choice of an agent must be governed by various considerations, such as the age and sensitiveness of the child, his or her social surroundings, the number of patches which are involved, and so on. The choice of an intelligent person to superintend the treatment, and the personal attention and time of the medical attendant were of more importance than the choice of the particular remedy. Ringworm was a disease which could be only cured in many cases in a reasonable time by the prolonged attention of an expert. Such treatment would cure recent patches, but if the disease was manifestly tenacious, he applied the principle of the irritative treatment, *i.e.*, he increased the strength of the application until inflammatory results ensued. This inflammation should be localized as far as possible around the hair-follicles, and sufficiently deep-seated to loosen the hairs. An eczema-like dermatitis was useless, and indeed only delayed proceedings. Therefore he did not favour blistering. The red oxide of mercury was one of the best irritative applications, and in special cases a little blistering fluid or croton oil might be added. Strong oleate of copper or verdigris or mercuric oleate ointment were useful. Applications like those associated with the names of Coster and Toulmin-Smith acted by their irritative effects. Epilation was to be tried from time to time. Every hair extracted entire with its inner root-sheath meant a cured follicle. Inflammation short of that producing a crust was aimed at, but the formation of crust was an excellent aid to cure.

Lastly, the author spoke strongly in favour of the croton-oil treatment of obstinate patches, or for rapid results, as laid down in the English text-books. He now never recommended the treatment for others to carry out, for a certain experience was absolutely necessary in order to avoid scarring. He had used it largely and often in carefully selected cases with brilliant results.

The Honorary Secretary (Dr. Abraham) followed by reading a paper on the subject by *Dr. Alder-Smith* (London), the conclusions of which were:—I. The treatment of extensive ringworm is still most unsatis-

factory, as many cases resist all remedies for many months, or even years.

II. The new remedies suggested during the last ten or twelve years are no better than the old ones—such as sulphur, or oleate of mercury.

III. It is not new “parasitocides” which are required, but some reliable means of getting them into contact with the deeply situated fungus. Therefore, my chief experiments in the last few years have been with different vehicles; but, so far, I have not been able to find any ointment-base or liquid that can be relied on to penetrate to the bottom of the hair-follicles and hairs, and thus to kill the fungus *in situ*.

IV. For some time I have been convinced that chronic ringworm is rarely eradicated by getting the so-called “parasitocides” into contact with the fungus; but, while their use is essential to prevent the spread of the disease, yet if such cases are cured, it is almost always by producing some alteration in the nutritive condition of the skin, so that the diseased hairs come out, leaving an artificial alopecia, or by causing irritation and exudation into the hair-follicles, so that the invaded hairs, together with the fungus, are thrown off, and a temporary bare place is left.

My chief reason for this assertion is the fact that hairs once invaded by the *trichophyton tonsurans* do not recover under the use of parasitocides, and thus grow up again in a healthy condition, but the diseased stumps invariably come out if the case be cured, and new fine downy hairs, which are not invaded by the ringworm fungus, replace them.

V. How is this result to be obtained?

After twenty-three years' experience in treating a very large number of cases of ringworm, I am still of the same opinion as when I wrote to the *Lancet* in January, 1880, where I strongly advised croton oil as the best irritant for the attempted artificial production of “Kerion,” or at least of sufficient exudation into the follicles to cause the diseased hairs to be thrown off with the discharge.

But it is necessary that the greatest attention should be paid to the details of this strong treatment—as I then fully described—or else trouble, or even slight scarring may result. One of the most important being that a parasiticide, such as carbolic glycerine (1 in 8)

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should be freely used, and the places must be bathed and poulticed constantly day and night, so that no scabs can form under which ulceration might occur. The few scars I have seen produced by some medical men have been due to neglecting this precaution.

VI. For the treatment of that variety of the disease called "disseminated ringworm," where there are isolated stumps about the scalp, I feel certain the best plan is to cause each stump to be thrown off by individually needling each diseased hair-follicle with a properly shaped fine needle—like the one exhibited—dipped in croton oil, containing an eighth part of carbolic acid. If this cause too much pustulation, creasote may be employed.

If there are only a few stumps to be removed, it may easily be accomplished by electrolysis.

VII. Lately I have used the croton oil treatment for small patches of recent ringworm with great success, taking special care to prevent the spread of the disease first by sulphur ointment.

Thus I have many times cured cases in a few weeks, that years ago would have taken me as many months, or even much longer, under ordinary ointments or lotions.

VIII. In conclusion, I feel certain that in 90 out of every 100 cases I have really cured, I have had to employ some croton oil sooner or later to the patches, or have had to needle out some isolated stumps left after other remedies had failed.

But there is no doubt in my mind that if some more simple, yet certain plan could be discovered for causing the diseased hairs to fall out, forming an artificial and temporary alopecia, it would be a grand success for eradicating this most troublesome and obstinate disease.

DISCUSSION.—*Dr. Eddowes*, (London), could not agree with *Dr. Fox's* opinion that an eczematous condition should not be induced by remedies, because he believed that the natural cure which frequently occurred at puberty often assumed the form of an eczema. He thought the greatest mistake was to excite a deeper chronic dermatitis of the scalp, and the formation of a dry, harsh surface, under which condition the hair did not grow well.

He then made reference to what he believed from his own experience to be the common causes of disappointment in the treatment of the worst class of cases. First, and most injurious, is the too prolonged and continuous employment of severe remedies, which produce and maintain a chronic dermatitis; next, insufficient removal of scales and secretion; and lastly, insufficient dressing between the various applications of such remedies as iodine and chrysarobin. In

consequence of the large number of rebellious cases with chronic dermatitis which had come under his care, and which were not in a suitable condition for the employment of chrysarobin, he said he had tried many remedies in a variety of ways. The most useful, so far, had proved to be a combination of tar, salicylic acid and vaseline frequently renewed, and the daily washing of the scalp with soft soap, hot water and tow. Tar not only gave substance to the ointment, but like chrysarobin, coloured the diseased hairs of fair children and mechanically assisted in excluding air from the follicles. The staining of the hair had the obvious advantage of enabling us more readily to estimate the extent and progress of a case. Under this treatment so many bad cases had been rapidly cured as to lead to the hope that it may render the employment of chrysarobin unnecessary as a rule.

Dr. Eddowes formulated the following conclusions:—

- (1.) That when properly treated, children should be allowed to attend school.
- (2.) We should not impair the physiological functions of the skin, though we may stimulate them.
- (3.) That the scalp should be, at least from time to time, thoroughly cleansed, so that our remedies may come into perfect contact with the skin.
- (4.) Air should be excluded as much as possible.
- (5.) Mercurial, and other poisonous preparations, though frequently very serviceable, should be applied to large surfaces with great caution, and never for a long period together without close supervision.
- (6.) It seems unnecessary to employ remedies in such a manner as to cause pain.
- (7.) That it is wise to treat the whole scalp in nearly every case at first, and to pay special attention to rebellious patches later on.
- (8.) That epilation is almost useless, and probably, when left to nurse or mother, often worse than useless.

Dr. Phineas Abraham (London) presented, on behalf of Mons. Sabouraud, of the St. Louis Hospital, Paris, a series of typical cultures and preparations of the large and small spored fungi of ringworm which have formed the subject of that gentleman's researches. He remarked on the great interest of the specimens, which probably were the first that British dermatologists had had the opportunity of seeing in this country. The cultures, shown in flasks, comprised the following:—

- I. *Trichophyton microsporon of Man* (growing on jelly with $\frac{1}{2}$ beerwort).
- II. *T. microsporon of Man*, growing on the "milieu d'épreuve," which consists of Gelatin 1.50, Peptone .80, Maltose 8.50, Water 100.00.
- III. *T. megalosporon of Man, with resistant mycelium* (growing on jelly with $\frac{1}{2}$ beerwort).
- IV. *T. megalosporon of Man* (growing on the "milieu d'épreuve," with crateriform growth).
- V. *T. megalosporon of Man, with fragile mycelium* (culture on jelly with $\frac{1}{2}$ beerwort).
- VI. *T. megalosporon of Man* (growing on the "milieu d'épreuve," with acuminate growth).
- VII. *T. megalosporon pyogena of the Horse*.—Type of the Trichophytions with white cultures and deep dermal growths (growing on jelly with $\frac{1}{2}$ beerwort). This is the species which causes in man:— α . On the scalp (of children), kerion of Celsus. β . On the beard, sycosis circinata. γ . On the smooth skin, agminate folliculitis.
- VIII. [Broken in carriage.]
- IX. *T. megalosporon of the Horse and Calf*.—Type of the Trichophytions producing slight dermatitis, with crumpled vermicular cultures on the "milieu d'épreuve." This is the species which causes in man hairy trichophytia of the beard, with slight

inflammation. X. *T. megalosporon* of roseate culture, with probable "origine avière," not yet demonstrated (culture on the "milieu d'épreuve"). This is the rare species which causes in man the dry hairy trichophytia of the beard.

The microscopical preparations included two specimens of the Trichophyton microsporon, from the heads of children,—the spores characteristically forming sheaths round the hairs,—and four specimens of hairs invaded with different kinds of megalotrichophyton.

Dr. Abraham gave an epitome of the conclusions which may be drawn from M. Sabouraud's investigations up to the present time, and which may be summarised as follows:—

1. There are two distinct types of the fungus Trichophyton causing ringworm in man—one with small spores ($2-8\mu$) which M. Sabouraud calls "*T. microsporon*," and one with large spores ($7-8\mu$) which he calls "*T. megalosporon*." They differ in their mode of growth on artificial media, and in their pathological effects on the human skin and its appendages. 2. *T. microsporon* is the common fungus of Tinea tonsurans of children, especially of those cases which are rebellious to treatment, and its special seat of growth is in the substance of the hair. 3. *T. megalosporon* is essentially the fungus of ringworm of the beard and of the smooth parts of the skin, and when the hairs are implicated, the prognosis as regards treatment is good. One-third of the cases of *T. tonsurans* of children are due to a Trichophyton megalosporon. 4. The spores of *T. microsporon* are contained in a mycelium, but this is not visible, the spores appearing irregularly piled up like Zoogloea masses: and growing outside they form a dense sheath around the hair. 5. The spores of *T. megalosporon* are always contained in distinct mycelium filaments, which may either be resistant or remaining when the hair is broken up, or fragile and easily separating up into spores. 6. The two types of fungi are never found together on the same head, and when the tinea spreads in a family the spores keep their characters in all the individuals affected. 7. The artificial cultures of the two types (developing best in jellies but little azotized), show distinct and constant characters. The cultures of *T. microsporon* show a downy surface and white colour; those of *T. megalosporon* a powdery surface, with arborescent peripheral rays, and often a yellowish colour. 8. Although the morphological appearances, mode of growth and clinical effects of each type of Trichophyton show certain characters in general, yet there are certain constant minor differences which point to the fact that there are several different kinds or species of fungus included under each type. 9. The species included under *T. microsporon* are few in number, and, with the exception of one which causes the common contagious "herpes" of the horse, almost entirely human. 10. The species of *T. megalosporon* are numerous and fall under several natural groups, the members of which resemble one another both from clinical and mycological aspects. 11. Many animals are subject to the growth upon their skins of particular species of *T. megalosporon*, and these when contracted by man give rise to special forms of trichophytia. 12. Each form of human tinea is caused by a distinct species of Trichophyton.

These conclusions are based upon an extensive series of microscopical examinations of cases of tinea in man and animals, of cultures on artificial media, and of inoculations on man and animals. He has as yet only worked out thoroughly a few of the species, notably that species—a pyogenous megalotrichophyton—which

causes the agminate folliculitis of man as well as circinate sycosis of the beard, and kerion of Celsus on the scalp of children.*

The President exhibited specimens obtained from patients in Edinburgh which appeared to confirm in all points the observations of Mons. Sabouraud.

Mr. David Walsh (London) read the notes and exhibited models of a case of tinea of the nails in an adult, of two years' duration, developing after tinea of the beard and body, and spreading from the fingers to the nails. The trichophyton was of the large spored variety.

Dr. Thin (London) considered that the management of ringworm consisted in selecting and applying remedies that set up inflammation around the hair follicles sufficient to lead to the death of the trichophyton, either by bathing the spores in a fluid in which they cannot live, or by favouring the growth of pyogenic organisms which are inimical to its life. But this inflammation must not be excessive, and he had been consulted in cases in which large patches of permanent baldness had been produced by the use of croton oil. Except in very exceptional cases, and in very exceptional hands, he deprecated the use of croton oil. That the effect of croton oil is due to the inflammation, and not to any antiparasitic effect, was shown by his having found that ringworm hairs, which had been soaked in it for a week grew the fungus freely in cultivating media. Mons. Sabouraud's researches opened up a new field, and considering the difficulties attending cultivations of these fungi, it was much to be hoped that other and independent workers would follow in his footsteps in order that his results might be confirmed or corrected.

As an example of the influence of the surroundings on the form of the fungus, he referred to the fact that whilst in hairs from a ringworm scalp nothing but spores might be visible, in the scales from a patch of body ringworm produced by contagion from these hairs, the fungus would be found as long, branching mycelia.

Dr. Radcliffe Crocker (London) recommended the employment of oleate of copper and, for older children, of salicylic collodion. He considered croton oil a valuable remedy, most useful in very disseminated cases, but one which must be very carefully employed. He had in a very short time cured a most severe case of twelve years' standing, in a lady aged eighteen, with this drug combined with electrolysis. He agreed with Dr. Colcott Fox in regarding the production of eczema as highly undesirable.

Dr. Abraham advocated a combination of salicylic and carbolic acids in an ointment, half a drachm of each to the ounce.

Dr. Norman Walker (Edinburgh) said that ringworm occurred in animals with equal frequency in spring and autumn. The fungus may be cultivated and flourish luxuriantly in the absence of air; it is very easily grown in test tubes, and dead scales distinctly favour its growth. He agreed with Dr. Leslie Roberts that the so-called "spores" are misnamed; they are, in reality, short, jointed filaments; nor could he entirely accept the view of Mons. Sabouraud, that there was a pyogenous form of fungus. One of Mons. Sabouraud's organisms was curiously like a *Penicillium*. He thought that the facility with which the organisms grow in acid media, might be taken advantage of, and believed that a good deal of

* M. Sabouraud's researches up to the present time have been published in the *Annales de Dermatologie*, Nov. 1892, Feb. 1893, and July 1893, and in the *Annales de l'Institut Pasteur*, June 1893.

irritation accompanying the disease was due to the production of oxalic acid—a frequent product of fungi.

Dr. Brooke (Manchester) considered that the enlargement of related lymphatic glands, and the concomitant dyspepsia, suggested intoxication, with a toxine or ptomaine, rather than with oxalic acid. The main difficulty lay, not in the soil, but in getting the prescribed treatment duly carried out. In practice, he uses as base, a modified Lassar's paste with kaolin substituted for oxide of zinc, so as to make a more sticky application; with this he usually incorporates sulphur or creolin as a parasiticide. He expressed grave doubts as to value of epilation and considered the croton oil treatment as admissible only when the patient could be daily supervised by the medical attendant.

Dr. Colcott Fox, in reply, expressed his regrets that the discussion had turned rather upon *methods* than *principles* of treatment. He reiterated his doubts as to the possibility of curing the disease by mere antiparasitic measures, and pointed out that almost all parasiticides are, at the same time, irritants. He defended the practice of epilation if carried out on the lines indicated with precision in his address. He never recommended treatment by croton oil unless he was in a position to carry it out himself, and instanced cases to which no other remedy was comparable to it in efficacy and rapidity.

Dr. Arthur T. Davies (London) read a paper on the Treatment of certain Skin Affections by Thyroid Feeding, which will be found at page 257.

August 3rd.—The Hon. Secretary (*Dr. Abraham*) read for *Dr. W. Ramsay Smith* (Rhyl) a paper on "A definite form of Skin Disease allied to Erythema and Urticaria," which was a record, founded on a study of nearly fifty cases of a skin rash, of urticarial and erythematous characters, associated with considerable constitutional disturbance, exhibiting certain definite though diverse local manifestations and lesions, accompanied by intense itchiness of the parts affected, running a definite course, tending to recur in patients susceptible to it, and appearing almost epidemically in certain localities.

Dr. J. J. Pringle (London) was familiar with relapsing eruptions of urticarial type occurring without ascertainable cause in communities, almost in epidemic form, and occasionally affecting simultaneously several members of the same family. One of the most striking examples he had ever seen was reported in detail in *Dr. Allan Jamieson's "Handbook of Skin Diseases,"* First Edition, page 118.

Dr. H. Radcliffe Crocker opened the debate on the Etiology and Treatment of Psoriasis. His views were founded on the study and analysis of between eight and nine hundred cases of the disease seen in the last ten years, forming about 7 per cent. of hospital, and 8 per cent. of private practice. As regards sex, in private practice the

numbers were about equal, but in hospital practice females were twice as numerous as males; this he attributed to the debilitating influences of pregnancy and lactation, and the greater leisure of females to attend hospital. Cases had been recorded as occurring as early as 8 months, and as late as 85 years (Wilson); on the whole, he found that 72 per cent. begin before 30 years; 22·5 between 30 and 50, and 5·5 per cent. after 50. He considered that Hebra's dictum that "psoriasis is a disease of the healthy," required much qualification, and had done much harm. In patients above 30 years of age grave defects of health were frequently present, and in many of the younger patients careful investigation will often demonstrate that when their psoriasis is flourishing they themselves are not. The examination of the notes of 30 private cases when the disease began over forty years of age showed the following result:—gout, 7; dyspepsia and constipation, 5; diseases of the nervous system, 4; alcoholism, 3; renal disease, 2; heart disease, 2; healthy, 3; presumably healthy, 3; old age (81) atypical psoriasis, 1. Nervous disorders, to which Polotebnoff attached so much importance, are only one set of factors. Any causes of debility (*e.g.* suckling, mental overwork, etc.) is almost sure to bring on psoriasis in one predisposed to it. In a considerable proportion of cases it is hereditary, but seldom affects several members of the same family. He had, however, seen five out of seven children affected. The evidence as to inoculability was then sifted, reference being made to the well-known observations of Destot and Unna; to the cases of psoriasis developing after vaccination reported by Piffard, Robinson, Wood, Rohé, Nevins Hyde, Campbell and Chambard, as well as to Cazenave's case appearing in small-pox scars and Nielsson's two cases after erysipelas. As opposed to the theory of its animal diet origin, he cited the case of a young girl—nine years of age—who suffered severely, although by choice a rigid vegetarian. Gout, rheumatism, and rheumatoid arthritis exercise a modifying influence on the character of the eruption, causing great hyperkeratosis probably due to hyperidrosis. The discrepancies in the descriptions of the morbid anatomy of the disease by various writers were pointed out. On the whole, the evidence goes to show that whatever is the primary agent at work, it is impossible from the very commencement to separate the vascular changes of the papillary layer and the proliferating changes

of the epidermal layer; whilst no two histologists put the same interpretation on the phenomena found. Lang's epidermophyton (*Lepocolla repens*) was then considered, and the contradictory statements of Bulkley and Löwe regarding it mentioned, as well as the opinion of Ries and Weyl that the so-called organism was merely precipitated stain. Crocker himself had often seen minute round bodies between the scales of psoriasis which suggested organisms, but he attached no pathogenic importance to them.

In the face of all conflicting histological evidence careful investigation and analysis of all *clinical facts* alone will afford a workable theory. Those which seem to favour a micro-parasitic theory are:—(1) the disease attacks young, often practically healthy, subjects; (2) the inflammatory activity is generally slight; the lesions extend peripherically to form circular and gyrate patches; satellites are common; (3) all useful drugs are vegetable parasitocides; (4) the occasional apparent inoculability. The facts opposed to a parasitic theory are:—(1) the disease is symmetrical not only by continuity, but on distant parts (*e.g.*, elbows and knees), and it remains long limited to certain parts; (2) its liability to recur in predisposed subjects whenever they come under depressing or debilitating influences; (3) the rapid improvement whenever such influences are withdrawn; (4) the apparent inoculability is confined to very few instances, considering the great frequency of the disease. Nielssen's suggestion that cases of presumed heredity are really instances of contagion cannot hold good; if it were so, instances of communication from husband to wife, or *vice versâ*, would be common, rather than from parent to child, and it would be more frequent than it is to find several members of one family affected; (5) the frequent seasonal recurrence is inconceivable in a parasitic affection; (6) a considerable number of cases begin after middle life, and are accompanied by distinct departures from health. These considerations all tend to support a vaso-motor-neurosis theory, which is further strengthened by a consideration of the effects of arsenic—deleterious in the acute, beneficial in the chronic stages, and of diuretics, beneficial in the acute stage. There is little evidence in favour of a blood dyscrasia, the French views as to the connection with "arthritism," gout, rheumatism, and rheumatoid arthritis not receiving much confirmation in England. Wilson's theory that psoriasis is an attenuated form of syphilis is not

worth discussing. Since neither the vaso-motor-neurotic nor the parasitic theory by itself explains all the facts, Crocker suggested that there was nothing inconsistent in supposing that psoriasis is the outcome of a combination of the two factors, the neuro-vascular factor being the primary, and the parasitism being a secondary consequence, but necessary for the full development of the lesions.

The *treatment* internally rests on empiricism ; arsenic has probably no prophylactic power by acting on the nervous centres, and in acute cases is harmful ; probably it acts on the peripheral nerve endings, and its influence is local (peripheral arsenical neuritis, zoster, local pigmentation after subsidence of patches). Iodide of potassium in enormous doses (Haslund, Nielssen and others) acts beneficially, probably owing to its diuretic powers. Antimony is often given in hyperæmic cases and in robust persons, but requires careful watching. Turpentine is useful where the kidneys and digestive organs are sound by contracting vessels and reducing hyperæmia, and is less likely to cause hæmaturia than is usually supposed. Ten drops in a gum acacia emulsion should be given at first, three times a day, and large quantities of barley water frequently drunk to keep up the normal quantity of urine. Time did not permit of a full description of the local measures to be adopted, but the principles to guide one are:— (1) the complete removal of scales ; (2) the thorough application of the selected medicament into each individual spot ; (3) the choice of a drug microbicide according to the amount of hyperæmia present ; (4) when hyperæmia is acute, it must be treated like other acute dermatites, and only when activity is subdued should the more directly acting drugs be called in.

The points to which discussion was invited were (1) whether psoriasis is the outcome of any constitutional state or condition. (2) Whether there are sufficient facts to warrant our considering psoriasis a contagious disease. (3) Whether psoriasis is due to a neuro-vascular defect, to a parasite, or to a combination of these, or other factors.

DISCUSSION.—*Dr. Abraham* had seen 855 examples of psoriasis among 8,700 cases of skin disease in the last three years. He brought forward careful statistics as to frequency according to age, sex, etc., which in the main coincided closely with those of *Dr. Crocker*.

Dr. Mapother (London) expressed his belief in the micro-parasitic origin of psoriasis, and in the circulation of the parasite in the blood.

Dr. Eddowes declared his doubts as to the accuracy of diagnosis in many cases of psoriasis, which he thought were forms of seborrhœic processes.

Dr. J. J. Pringle thought that on the whole the balance of evidence was in favour of the vasomotor-neurosis theory, although there was only indirect evidence to support it. The arguments adduced for the parasitic theory were unconvincing and contradictory, while the proofs of the contagiousness of psoriasis were conspicuously absent. He knew of no microbe which, as had been suggested, entered the circulation, and thereafter produced accurately symmetrical, circumscribed lesions; nor could he give his support to *Dr. Crocker's* mixed theory which savoured of compromise, and seemed to him almost apologetically advanced by its author. He agreed with *Dr. Crocker* in thinking its symmetry and undoubted heredity in favour of the trophoneurotic view, but thought that the frequency of its association with rheumatoid arthritis (admittedly a trophoneurotic condition) had been underrated. In support of his view he also cited the appearance of psoriasis in places of diminished resistance, such as are submitted to pressure (elbows and knees), of low vitality (scars), or the seats of seborrhœa. In private practice he found treatment much more satisfactory than in hospital, and attributed this mainly to keeping the patients under the influence of small doses of arsenic, which he believed do exert a prophylactic influence—after local manifestations have been removed by suitable measures. He considered the utility of iodide of potassium in doses of a drachm three times daily as tending to support his views, citing as collateral evidence its effects, frequently marvellous, in cases of true spasmodic asthma.

Dr. Leslie Phillips (Birmingham) thought that undue weight should not be given to its seasonal recurrence as making against the parasitic causation of psoriasis; for in this relation we should remember that mushrooms come into season at or about a special time. The country proverb of "once a mushroom field always a mushroom field," suggested certain analogies between the psoriasis-affected skin and the mushroom-affected field. It is easier to harmonize periodicity, having long periods of intermission with the parasitic view, than with the laws governing tropho-vital action. He showed a drawing in which a patch of this year's psoriasis had appeared at the periphery of a sepiæ patch indicating the area of last year's plaque cleared with chrysarobin. The new patch in its evolution had followed the edge of the pigmented area, but had not extended into it: a condition which appeared to indicate that in some cases antiparasitic applications might not only cause the disappearance of the eruption but produce a local immunity lasting, at any rate, a year.

Dr. Stopford Taylor (Liverpool) said that psoriasis is certainly inherited in many cases, though it frequently appears without any assignable cause. The parasitic theory is very enticing, but up to the present has not been proved.

Arsenic is a valuable remedy in chronic psoriasis, but in acute cases certainly makes the disease worse. He had seen a recrudescence of the disease in a chronic case while the patient was taking 12-minim doses of liq. arsenicalis three times daily.

Acetate of potash in ʒii doses is better than iodide of potassium in acute psoriasis, and is free from the objections raised against the latter drug, especially when given in those huge doses recommended by Neilsen.

For local treatment in acute cases he had found nothing so good as the ungt.

glyc. plumb. sub-acet. In sub-acute cases, applications of ungt. zinci and huile de cade, followed by ungt. picis liq. 3j and vasceline 3vii, complete the cure.

In chronic cases chrysophanic acid ointment is certainly the best remedy, but care should be taken not to employ it too strong lest the disease be aggravated by its use, and converted into one of dermatitis exfoliativa.

The discussion was continued by Dr. Thin, who recalled his observations upon the minute anatomy of psoriasis, and by Dr. Norman Walker, who supported the view of its parasitic origin.

Dr. Radcliffe Crocker briefly replied.

Dr. Byrom Bramwell (Edinburgh) read a paper upon "The Value of Thyroid Feeding in Psoriasis and Skin Affections," which was illustrated by a series of photographs of the cases treated. These were seven in number, and in all except two marked benefit had resulted. In another case, complicated with epilepsy, no change had occurred, but the patient was taking bromide of potassium. He was led to try the remedy by noticing the exfoliation of skin in myxœdema cases treated with thyroids.

CASE I.—A woman, aged 18, with obstinate psoriasis of very old standing, took five minims three times daily of Brady and Martin's thyroid extract, which, in less than a week, produced copious desquamation, the epidermis coming away in large sheets. She was discharged in three months. Having remained well for a month, a slight recurrence had taken place.

CASE II.—A woman, aged 35, had suffered for seven or eight months. She had been over-irritated by chrysarobin. The thyroid extract was given in the same doses as in Case I. In a few days large scales separated, and she was cured in two months.

In Case III., also a woman, remarkable improvement took place in three weeks, and she is now practically well. The other case, although encouraging, was not so conspicuously successful.

Dr. Symons Eccles (London) read a paper on "Massage in Diseases of the Skin." The general effects of massage on the nutrition of the body as a whole have already been more or less fully considered in previous papers, and in these the skin participates fully; but the local effects of massage on the skin vary with the character of the manipulation.

Light Friction produces apparently the same effects as the application of cold to the surface of the skin; but whereas the initial effects of cold, thermal and mechanical stimulations are identical, if the

former is prolonged the cutaneous circulation of the part is slowed, congestion, overfilling of lymphatics and consequent tumefaction of the part ensues, while with the continued application of friction, contraction of vessels is replaced by relaxation, pallor by warm redness, and if the vigour of the manipulation be increased to *Firm Rubbing*, the loose epithelium is removed, the contents of sebaceous follicles are expelled, dilatation of arterioles, insensible perspiration, sometimes sensible sweating ensue, while the friction being always centripetal, the lymph-vessels are unloaded and venous circulation is greatly stimulated. If rolling and squeezing be added, the superficial tissues being lifted as it were from the subjacent fascia, and the whole thickness of the skin and subcutaneous tissue well kneaded, the vascularity of the part is greatly increased, the lymph spaces are drained, and thus absorption by blood and lymph-vessels is accelerated.

The influence of massage on surface temperature has been studied in ten experiments on healthy persons within the last twelve months (in addition to those recorded in previous papers), with a view to differentiate the effects of skin-shampooing from those resulting after massage in which the parts subjacent are thoroughly kneaded.

Light friction reduces surface temperature. In ten experiments the temperature of the skin so manipulated fell from two to four degrees Fahr. below the untouched free surface temperature of the opposite side.

Firm friction, kneading and rolling of the *skin* of the limb increased the surface temperature in all cases.

Thorough massage of the whole limb not only increases the surface temperature of the limb manipulated, but also is followed by a rise of temperature in the free surface of its fellow of the opposite side.

In testing the effects of massage on the cutaneous nerves it is necessary to distinguish between immediate effects of each manipulation and results following massage of a part daily repeated. Light friction produces no perceptible effect. Firm friction increases tactile sensibility and improves local sense. Kneading immediately decreases both; it also reduces temperature sense for heat and less so for cold.

After a week's daily thorough massage of the same limb the results were particularly remarkable in reference to local and tactile sense. The temperature sense for heat and cold was acuter than on

the opposite side. Massage of a part greatly decreases the resistance of the uninjured skin to the passage of electrical currents.

If the alternating constant current is used for percutaneous medication by saturation of the electrodes with a solution of the substance selected, preliminary massage of the part will increase the rapidity with which the drug will be absorbed. Finely divided dusting powders used after massage appear to be more efficacious than inunction without massage.

The best results obtained by the author from the use of massage in skin affections were obtained in cases not strictly cutaneous; though being marked by interference with cutaneous nutrition, they fall within the limits of dermatology. Enfeebled, sluggish circulations, resulting in impaired vascularity of the skin, with consequent peripheral ischæmia, cyanosis, and conditions closely allied to Raynaud's disease, are unquestionably greatly improved by massage, which also serves as a prophylactic against recurrent chilblain circulation.

Indirectly, massage may be employed over the vaso-motor centres controlling the vascular conditions of parts affected by skin lesions. Friction and kneading over the cervical and dorso-lumbar regions, and along the erector spinæ, appear to modify inflammatory conditions of the upper and lower limbs respectively, while abdominal kneading affects the peripheral tension most remarkably.*

It is in lesions characterized by the accumulation of inflammatory products in overloaded lymphatic spaces, clogged lymph channels, and blocked glands that massage proves most certainly valuable.

In scleroderma and psoriasis, mechanotherapy has been useful, and could be justifiably accredited with the involution of the disease; while in examples of various forms of vaso-motor enfeeblement and cutaneous neuroses, *e.g.*, pruritus, anidrosis and alopecia, the effects of treatment were more or less marked. In acne and comedones dry massage was most efficacious.

In a recent work on skin diseases the author declares that half the battle depends on the thoroughness with which the preliminary and curative agents are rubbed in. This may be further enlarged in the sense that the other half of the battle would be in favour of the

* "Internal and External Temperature, &c." *British Medical Journal*, Dec. 1st, 1888.

therapeutician if he adopted massage to promote absorption not only by, but from, the skin before applying the special local medication.

Mr. David Walsh (London) read a paper on "Metastasis, or Shifting Elimination as a Factor in certain Skin Inflammations." He proposed to treat the skin as a great excreting organ, and, as such, liable to the inflammations which affect excreting organs, presumably on account of the excretion of some irritant substance in the blood. As three distinct types of irritant substances, iodine, uric acid and the scarlatina virus might be taken. Uric acid in excess inflamed every excretory outlet of the body, and in this way are produced excretory dyspepsia, diarrhoea, dermatitis, bronchitis, nephritis, and various other inflammations. The virus of scarlatina likewise inflames and damages every excretory outlet. In both gout and scarlatina every variety of metastasis of inflammation takes place. Uric acid is found in every secretion of these gouty inflammations. Scarlatina germs must occur in the shed epidermis, which are highly infective. As to iodine, it is usually excreted by the kidney; but when from any reason its excretion is thrown upon other organs, the result is iodism. Iodine is found in the pustules of iodism (Adamkiewicz and Guttmann). The skin has not the same facilities for getting rid of the drug possessed by the kidneys, and the solid papule of iodism is probably due to the irritation of slowly-excreting iodine, vicariously directed to the skin. Radcliffe Crocker admits that the iodide rash is due to the direct excretion of the drug, but in the case of gouty eczemas refers the skin trouble to reflex action excited by the presence of uric acid in the bowel. He does not state, however, how the uric acid is to reach the bowel from the gouty tissues. Many authorities appear to admit the presence of an internal irritant as a direct exciting cause of dermatitis. Thus, in the article "Gout" in Fowler's "Dictionary of Medicine," the passage occurs:—"The various mucous membranes and the skin become irritated, congested, and diseased by the presence of a toxic agent, which they can but imperfectly eliminate." No general law, however, has yet been formulated. Pye Smith takes a very pessimistic view of the situation, and forcibly deprecates all attempts at sifting the important point of etiology of eczema, on the correct apprehension of which scientific treatment must ultimately depend. As a body,

dermatologists appear to regard the subject as out of the range of reasonable inquiry or speculation. In suggesting a possible relation of the excretory functions of the skin to certain forms of dermatitis, an attempt has been made to supply the connecting link between a number of admitted physiological and pathological facts. At the same time this paper endeavours to show how abnormal blood is likely to inflame the skin no less than other excretory outlets.

Dr. Lyon Smith (Newcastle-on-Tyne) then exhibited a case of supposed hæmadrosis of the face and forehead of a little girl. In the discussion which followed, many were of the opinion that the eruption was feigned.

Dr. V. H. Rutherford (Newcastle-on-Tyne) exhibited an interesting case of extensive cicatricial keloids of the abdomen threatening to become sarcomatous.

At 3 P.M. *Dr. Norman Walker* gave a demonstration in the theatre of the Medical Section on the Pathology of Rodent Ulcer. He said that it was necessary, in investigating the subject, to assume a reasonable scepticism as to the diagnosis of specimens submitted to the pathologist. Cases were often diagnosed as rodent ulcer when careful inquiry elicited that they had only the character of chronicity, and in some cases the clinical diagnosis between rodent ulcer and epithelioma was almost impossible. The disease does not commence as an ulcer; there is always a wart stage, and sometimes the ulcer is very minute.

There was no connection between rodent ulcer and squamous epithelioma, except the fact that both were largely composed of epithelial cells. It was quite true that there were no cell nests in rodent ulcer. Neither were there in cancer of the breast, but one does not distinguish between scirrhus and epithelioma by that fact. The term epithelioma was used in this country, except by Hamilton of Aberdeen, in a restricted sense, and in that sense rodent ulcer was not an epithelioma. It was a carcinoma, and in its type and arrangement of the cells corresponded to that described as glandular or tubular carcinoma. Such being the case, one must look for its origin not in squamous epithelium but in glands. It was said that the glands of the skin, being derived from the epidermis, must, when affected by cancer, proliferate as do the epidermic cells. But the mamma is a gland derived from the skin, and the cancer of that organ is carcinoma

and not epithelioma, and there seems no reason to suppose that one gland should act in one way and another in another. When carcinoma of the breast affects the skin, the appearances are almost identical with rodent ulcer.

Most of his cases arose from the sweat-glands or ducts. In one case he was doubtful whether it did not arise from the sebaceous glands. The formation of the ulcer was due to the growth of the cancer obstructing the blood-supply to the skin.

In many cases, the evidence as to the origin from the sweat-glands was direct. The normal slow growth of the cells of the sweat-glands was, perhaps, the cause of the slowness of the growth of rodent ulcer; the growth of the rete cells was very rapid. The crateriform ulcer of Hutchinson is a link between rodent ulcer and squamous epithelioma, for it is a squamous epithelioma which arises from the sweat-glands, and was possibly a reversion of the cells to their earliest original type of surface cells. Tumour of the mamma presenting similar characters had been described, but were always supposed to have arisen from the epidermis. Unfortunately he had not seen such a case.

The new growth is not purely epithelial. There is sometimes distinct proliferation of the stroma and the formation of a true scirrhus. Billroth, long ago, on clinical grounds, described the disease as "scirrhus cutis." The disease goes much deeper than it appears to, and excision, though not necessarily wide, must be deep.

As to statistics, he agreed with Mr. Roger Williams, that the age was usually put far too high, and Dr. Crocker was, he thought, not justified in saying that Mr. Williams' cases were exceptions. His own statistics gave the average age for commencement at 40. He thought he could find an explanation of the difference of opinion. He procured from the Surgical Registrar of the Edinburgh Royal Infirmary statistics of the cases for some time, which gave an average of 55, but that was at the age at which they were operated on—often years after their commencement.

The only real treatment is the knife. Some cases would do very well with scraping, but he knew no means of distinguishing these cases except the microscope. The same applied to caustics. Some cases were undoubtedly beyond the reach of the knife, but these cases should become yearly less numerous as the knowledge of rational

treatment spread. He saw very frequently cases which had been nearly driven beyond the reach of the knife by the use of irritating applications.

As to arsenic internally, as recently recommended by Lassar, he could see no reason to hope for improvement, and regretted that the advice should be given by one whose word carried so much weight.

In reply to Dr. Brooke, Dr. Walker could only repeat that he had seen no evidence of its origin from the rete, and could hardly conceive of a tumour of the type of glandular carcinoma arising from squamous epithelium. He had read Dr. Hume's well-known paper very carefully, but could only come to the conclusion that Dr. Hume was wrong. He was very much interested to hear of a case of metastasis. Perhaps had the original growth been excised instead of cauterized it would not have occurred.

In reply to Dr. Pringle, he said that while it was of course known that erysipelas sometimes cured cancer he would not care to use the treatment. As to the clinical diagnosis between rodent ulcer and epithelioma, he had already dwelt on the difficulty. The history was very important. In opposition to the theory which the name supported—the epithelioma was an ulcer much earlier than the rodent. There was at the margin a peculiar translucent appearance, which could perhaps be most nearly compared to the appearance of the horn on a living light-coloured cow. There was very often more tumour than ulcer.

In reply to Dr. Bernard, he regretted that he had misunderstood Thiersch, whose work every one must admit to be admirable. He had stupidly adopted the meaning of the word "flach" from an English quotation, and in reading the original had not corrected himself.

In reply to Mr. D'Arcy Power, he could only say that in his experience the sweat-glands were very numerous on the face. Into the question of parasites or cell degenerations he did not wish to go. In some of his cases the "parasites" were very numerous, in others very few.

It was remarkable that the statistics of St. Bartholomew's for last year showed an enormous proportion of rodent ulcer to epithelioma, he thought about 1 or 2.

He hardened all his specimens in corrosive sublimate, imbedded in paraffin, and cut them with the Cambridge Rocker.

August 4th.—*Mr. Bidwell* (London), read a paper on the Surgical Treatment of Lupus, in which he drew special attention to the treatment by free excision, combined with skin grafting by Thiersch's method. He had operated on four cases by this method: in one of the cases the lupus involved a superficial area of 30 square inches, which was completely removed, and covered with skin grafts. Three of the cases were perfectly satisfactory, the scar being very slight; in the fourth case a slight recurrence appeared in one margin six months after the operation. In all the cases the lupus had existed over fourteen years. The dissecting was carried down to the deeper part

of the subcutaneous fat. He pointed out that, as the lupoid tissue extended to the deeper layers of the corium, and that sometimes the subcutaneous fat was altered and adherent to the lupus, free excision gave the best hopes of permanent cure; this method without skin grafting was impracticable except in very small patches.

The method of operating was described, special stress being laid on the use of antiseptics. The wounds usually healed within a fortnight, and no after treatment was necessary. The cicatricial contraction after the operation was neither excessive nor unsightly. Reference was made to cases operated on in a similar manner by Messrs. Bruce-Clarke, and Watson-Cheyne.

Dr. Eddowes read a note on Tuberculous Eczema, an abstract of which is to be found at page 264.

Discussion was invited on these two papers conjointly.

Dr. Colcott Fox thought the value of excision in carefully selected cases of lupus was undoubted, but in most of those he had seen, in which it had been resorted to, the resulting disfigurement was excessive. Moreover, all the cases shown as "cured" presented lupus nodules. He strongly condemned the term "tuberculous eczema" as a misnomer, and in *Dr. Eddowes'* case, which was clearly one of lupus, "he could not see where the eczema came in." Such hybrid terms as "eczema-lupus" were equally objectionable and misleading; the disease described under that name by Hutchinson was nothing else than that phase of lupus described by Hebra as *lupus exfoliativus*.

Dr. Fox afterwards made some remarks on his general treatment of lupus, a disease, he said, which we cannot, by any known method, cure. Cases could be greatly benefited, but only by exercising the most assiduous personal attention. He described his personal management of lupus, and the different circumstances in which he employs caustics, scraping and the cautery; the latter he considered too risky for frequent employment. He still continues to use tuberculin in minute doses, and regards it of great value as a prophylactic against relapse.

Dr. Brooke regretted that the term "eczema" had been employed to describe *Dr. Eddowes'* case, which seemed to him to be an ordinary lupus accompanied by satellites. *Unna's* views on the nature of eczema were personal and peculiar, but the case read did not accord at all with the condition termed "tuberculous eczema" by *Unna*, with which he—the speaker—was perfectly familiar, especially in young strumous children, although he saw no evidence of its tuberculous nature. This form of eczema occurs about the auditory meatus, eyelids, nostrils and lips, but the tubercle bacillus had not been proved experimentally to be capable of producing an eczematous process.

In his opinion excision was a heroic method of treatment absolutely unjustifiable except as a means of plastic recovery of a loss of tissue. Surgeons were too prone to resort to the purely surgical treatment of lupus, which is very seldom successful in removing the whole of the disease, and distinctly inferior to the results obtained by less trenchant operative procedures, combined with the careful use of selective

caustics, and continued over a prolonged period. The field for operative interference may be very much diminished by promoting the absorption of lupus tissue by the persistent inunction of an ointment containing oleate of mercury, ichthyol and salicylic acid incorporated in a coloured zinc, starch, and vaseline paste, which in many cases reduces the amount of disease to mere nodules.

Dr. Abraham thought Mr. Bidwell's results very satisfactory. He advocated the employment of strong carbolic acid in early cases of lupus.

Dr. J. J. Pringle agreed with Dr. Fox and Dr. Brooke that the case described by Dr. Eddowes was an example of a common form of tubercular disease of the skin to which the term "eczema" was in no sense applicable. He was familiar with Unna's description of "tuberculous eczema," and had long been on the look-out for cases of it, but had only seen three which accurately tallied with the description. As all three rapidly recovered under ordinary local and constitutional treatment, and without leaving scars, he concluded that they were not of tubercular nature, but the tuberculin test had not been applied.

He thought that the number of cases of lupus, in which excision was applicable, was distinctly limited, and the results obtained were not so satisfactory as they were claimed to be. He would like to see them a year hence. Brooke's ointment had all the advantages he claimed for it both in chronic dry lupus and in more florid cases of so-called scrofulo-dermatous type. The chief objection to it was that it controlled and reduced the disease to such an extent that patients after its use were often so improved that they refused to listen to proposals for surgical interference. In a few of such cases he had had good results with the galvano-caustic, and with Unna's salicylic acid and creosote plaster-muslins, after the lupus had been reduced to its simplest nodular state.

Dr. Norman Walker had had two successful cases of excision of lupus on the hands. Two other cases of excision of patches about two inches in diameter had healed slowly, but the disease recurred in the scar. The reason of these unsatisfactory results is manifested by microscopical examination, which shows that the disease is much wider and deeper than surface inspection reveals. Veterinary experience in animal tuberculosis is identical. He thought Dr. Eddowes' case a typical one of tuberculosis of the skin, and deprecated the use of such terms as "tuberculous eczema," "lupus eczema," etc. He hoped that an opportunity would soon be afforded for fully discussing the various forms of tubercular affections of the skin.

Dr. Stopford Taylor's experience of excision in about twenty cases was unsatisfactory, as we have no knowledge, and no means of ascertaining the depth of the tubercular foci. He recommended the employment of the cautery as useful in preventing recurrence "by bracing up and strengthening the tissues." Excision, is, however, the best treatment for lupus of a single finger or toe. He showed drawings of a very extensive lupus of the face of a lady which he treated with great success in his customary manner, which is as follows:—The patient being anæsthetized, he washes the part with strong caustic potash and scrapes thoroughly. The following day he makes "hundreds of punctures" with the thermo-cautery needle and uses the knife round the patches, going well through the skin. He then strokes the patch repeatedly with the cautery button at white heat till it is brown, hard and leathery. The patient wakes up free from pain. Even in the best cases recurrences take place; these he treats with chloride of ethyl and the thermo-cautery. In weakly strumous children the hæmorrhage from scraping

is often considerable. He always attends to the dressing and after-treatment himself. The slough usually separates in five days, after which he uses simple water-dressings; he finds perchloride of mercury lotions irritating, and the condition they produce worse than the disease itself. He has resort to dry dressings as soon as possible, and gives a preference to iodide of starch and iodoform. He always uses cocaine before cauterizing granulations.

Mr. Bidwell and *Dr. Eddowes* briefly replied to the criticisms upon their papers, the latter admitting that he had used the word eczema in a special sense, and did not place importance upon its retention.

The President read a Therapeutic Note on Emol.

"Emol" is the adopted name of a natural product found in considerable quantity on the estate of Lord Rollo at Dunning, in Perthshire, but refined and purified by various intricate processes. It is a soft, impalpable powder of a delicate pink hue; and its nature has been investigated by *Dr. Readman, F.C.S.* From his observations it is analogous to fuller's earth, but it differs from the varieties usually met with in the market. It contains, among other ingredients, steatite, and to its presence some of its characters may be due. Added to hard water, it possesses a remarkable power in softening it. Employed with warm water, it acts as a sort of natural soap, readily and pleasantly cleansing the skin. Used as a paste with water, and applied, covered with some impermeable material, such as oiled silk or gutta-percha tissue, continuously for some time, it macerates and causes to separate painlessly those accumulations of hard, thickened epidermis encountered in eczema and in keratosis of the palms and soles; though its use must be supplemented by the subsequent application to the smooth, soft surface which results, of unguentum vaselini plumbicum, or of glycerine of starch containing resorcin. It is an admirable and harmless dusting powder, more agreeable in appearance and more efficacious than many. It can be obtained direct, or through any chemist, from Keltie Castle, Dunning.

Dr. Colcott Fox read a paper on the "Erythème Induré des Scrofuleux" of *Bazin*, which appears at page 225 of this Journal, and will be concluded in next number.

Dr. J. J. Pringle congratulated *Dr. Fox* on drawing attention to this new, or rather resuscitated subject, and stated that, having observed about half-a-dozen well-marked examples of the disease, he was in a position to confirm almost all *Dr. Fox's* observations. The first case he had seen was a particularly healthy-looking girl, with no evidence of scrofulous taint; but she had subsequently suffered from suppuration of the cervical lymphatic glands. Some patients, especially

those above middle age, offered no manifestations of the tubercular diathesis other than the skin affection, and ulceration did not necessarily occur in all cases. The differential diagnosis was of the utmost importance, and was not usually a matter of difficulty when one was familiar with the disease. Of course, when ulceration occurred, surgeons diagnosed the condition as syphilitic. The points of contrast which he relied on were: (1) the lesions of *E. indur * were at first subcutaneous, and could only be determined by palpation; (2) they were comparatively painless; (3) they were very indolent; (4) they presented seasonal recurrence; (5) there were no evidences of syphilis, congenital or acquired; (6) anti-syphilitic treatment was unavailing—indeed, iodides seemed to aggravate the condition. From *erythema nodosum* they were differentiated by (1) their tendency to ulcerate; (2) their position on the posterior, rather than on the anterior aspect of the legs, ulceration usually, in his experience, occurring over the middle of the gastrocnemius about the junction of the lower, with the upper two-thirds of the leg; (3) the age of persons affected and concomitant circumstances. He could not follow Dr. Fox in his differentiation of the disease from scrofulo-tuberculous gummata, with which he considered it practically identical. Rest and bandaging, with cod-liver oil internally, were the most efficacious measures of treatment, but recovery was slow.

Mr. Walsh pointed out the necessity for eliminating syphilis, especially in its late hereditary form, in making a diagnosis.

Dr. Brooks thought that the careful observations recorded by those who had introduced the subject sufficed to put the possibility of syphilis out of court. He adduced a characteristic case in his own practice which had long been regarded as syphilitic, but subsequent observation and the result of treatment proved its true nature.

Dr. Norman Walker regarded the disease as undoubtedly tubercular. He advocated the more frequent appeal to inoculation experiments to establish a diagnosis of similar conditions.

Dr. Colcott Fox briefly replied.

Dr. H. V. Rutherford demonstrated an interesting case of chronic disseminated tuberculosis of the skin in a boy.

The proceedings closed with a hearty vote of thanks to the President, moved by *Dr. Brooke* and carried by acclamation.

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ON THE ERYTHÈME INDURÉ DES SCROFULEUX OF BAZIN.

BY T. COLCOTT FOX, M.B. (LOND.), F.R.C.P.

(*Conclusion.*)

THE foregoing cases will sufficiently illustrate this curious affection as I have observed it. The chief points are as follows:—the lesions are nodular in character; they arise in the hypoderm and may remain deep-seated for a considerable time without projecting the overlying skin; in this stage they are only to be felt on palpation; sooner or later, however, they involve the more superficial layers, the skin assumes a reddish hue as in erythema nodosum, and later a violaceous tint, but there is not the same sequence of tints as seen in the latter disease. The size of the nodules on the legs may be given roughly as that of a pea or hazel-nut, but occasionally they attain a larger size. On the fingers they are much smaller in my experience. They are as a rule indolent in their course, and this is of importance, because they contrast in this respect with syphilitic and tuberculous gummata. They terminate in one of several ways. They may undergo involution, partially or completely. I believe atrophic areas occasionally result. Or they may suppurate or necrose *en masse*. I have not seen the entire nodule suppurate, but several times have observed a small perforation through which issues a little sero-pus. The necrosis of the entire lesion is not at all uncommon, and then a punched-out circular or oval ulcer is produced, remarkably

like that left by a syphilitic gum. I have observed some of the lesions. The nodules are generally rounded and sometimes oval. Their distribution with the long axis corresponding to the direction of the limb is not so marked as in erythema nodosum. They are usually discrete and limited in number to six or ten on each leg, but occasionally they are more numerous and may be closely set and confluent. In the latter case considerable areas of infiltration are formed, and the necrosis of the constituent nodules forms polycyclical ulcers like those of gummatous syphilides. Besnier says that ulceration occurs only accidentally in response to external injury, but I am not satisfied on this point. I am inclined to think that the necrosis is often a natural termination of the process. The lesions are certainly often free from pain and tenderness even when handled, but when a more active inflammatory process has set in, or when the legs are swollen after much standing, a good deal of pain and throbbing may be experienced. The distribution of the lesions varies. I was at first struck with the frequency with which the backs of the legs, just below the calf, were affected. The lower parts of the legs, especially the back and outer parts, are most involved, but the lesions may occur anywhere below the knees, or all round the limb, and I have on two occasions seen them on the inner part of the front of the lower third of the thigh. Bazin stated that the face might be involved. I have only identified the nodules on the lower extremities and on the backs of the fingers and perhaps on the ear, but further experience is necessary before pronouncing positively on the localization. Some observers, *e.g.*, Crocker, I believe, have met with cases characterized by nodular lesions distributed on the arms and other regions, which they are inclined to include in the group under discussion. I shall not deal with this phase of the subject further, as I hope others will contribute their experience to the *Journal of Dermatology*. It will be of interest to determine whether the distribution of the lesions may be confined to one leg. I believe I have noticed one such case, but obviously the difficulty in making the diagnosis from syphilis is much increased in such circumstances. The majority of my cases occurred between the ages of twelve and seventeen years, but I met with a typical case at the age of forty-eight, and Crocker has seen it still later. I have never observed

the affection in boys, although Bazin seemed to doubt whether it was much more frequent in girls than in boys. Crocker also states that boys may be affected.

The subjects in which these lesions occur are undoubtedly below the standard of health. Some of them in my experience have been thin, rather pallid and not well-grown, others have been of stout flabby habit with florid complexion. Whether these features denote any one type of constitution which can be suitably characterized by such designations as "scrofulous" or "lymphatic" I will not stop to discuss. I will only point out that the subjects do not appear to be robust. There may be some suspicion of hereditary syphilis in certain cases, but I have not found the evidence either strong or constant. In two cases there were suppurating glands in the neck, but a tuberculous history, personal or family, is not marked. Certainly there are not any marked constitutional symptoms directly associated with the evolution of the lesions. Some of the subjects have a distinctly poor circulation, and this seems to be the most prominent feature in these cases. Besnier refers to the frequency of erythromelalgia and hypertrophying doughy œdema of the legs. The erythromelalgia I have not observed, but some degree of œdema is not uncommon. It is not quite easy to determine how far such œdema is a contributing cause of the lesions, or to what extent it is a secondary symptom. Doubtless it is very easily induced in these subjects by standing and the dependent condition of the legs. Moreover, it is certain that the affection is very prone to occur in young females who stand a great deal at their work. Chilblains also are not infrequent, and there is reason to believe that the lesions form more particularly in winter or recur in the cold seasons.

The nature of the affection is not at all clear. The character of the lesions and their course and symptoms do not agree with a thrombosis or phlebitis, nor are varicose veins at all a prominent feature. The age at which they are commonly developed, the almost constant absence of a corroborative history or symptoms of hereditary or acquired syphilis, and the protracted course of the lesions, exclude syphilis. Scrofulo-tuberculous gummata undergo degenerative processes more rapidly and completely; they vary more in size; they are not localized so conspicuously on the legs. Moreover, the age of the subjects, the absence of other symptoms of tuberculosis, and the

number of the lesions, are adverse points. I regret that I am unable to contribute any information derived from histological examination, or experimental investigation. Nor do I think I can assist in any way by discussing the point whether the lesions, which are indolent circumscribed inflammations, can arise as the direct outcome of a constitutional state which may be described as scrofulosis or lymphatism, or whether they are due to local disturbance of the circulation, blood-vascular or lymphatic, apart from any such diathesis.

In conclusion, I may add a few remarks on the diagnosis. If the lesions have recently developed, and there is some cedema of the legs and aching, erythema nodosum may be simulated. But the lesions are more circumscribed, firmer, do not display the same sequence of colouring, arise in the hypoderm, are not specially developed down the front of the legs, but often on the back of the lower third, or on the outside, or dotted all round the leg. There is an absence of constitutional symptoms and local tenderness. If any doubt exists, the subsequent protracted course, the indolence of individual lesions, the continued evolution of fresh ones, the violaceous colour, and the frequent necrosis and production of scars will clear up the diagnosis.

The number of the lesions, the absence of actively inflammatory symptoms, and the course of the affection will exclude thrombosis and phlebitis.

Tuberculous gummata may terminate in necrosis producing punched-out ulcers, and they may, of course, be multiple and even numerous, but, as a rule, they form abscesses. They are usually met with also at an earlier age than the lesions under consideration, and are less numerous, and apt to attain a larger size. Other signs of tuberculosis will probably be in evidence. The distinction from syphilitic gummata is certainly very difficult, and it is only by observation of the case and a consideration of all the circumstances that a correct opinion can be formed. The persistence of individual lesions, the prolonged course of the affection as a whole, the number of the lesions, the frequency in young girls, and the bilateral localization on the legs, are the chief points against syphilis. There is hardly a single point, however, which is free from difficulty in making the diagnosis in one case or another. The only safe plan is to consider the symptoms as a whole. With regard to the iodide of potassium test, it is asserted that syphilitic gummata will prove very resistant to

such treatment on the legs. No doubt this may be so occasionally, but as a rule syphilitic gummata of the legs yield easily, and I therefore attach importance to this therapeutic test. On the other hand, when these cases of erythema induratum are received into the wards of a hospital the antisiphilitic treatment appears to act admirably in many cases. There can be little doubt that rest in the horizontal position and methodical compression of the leg are the most important curative influences. India-rubber bandages irritate unless their action is carefully watched, and similarly resolvent applications, such as iodine, though useful, require attention. The nodules in a certain stage are easily induced to necrose or suppurate.

(For the ensuing discussion see page 291.)

NOTES ON A FORM OF ACNE LUPUS

WHICH OCCURS ON THE SHOULDERS IN CONNECTION WITH LUPUS
ERYTHEMATOSUS OF THE SCALP.

BY JONATHAN HUTCHINSON, F.R.S.

I HAVE now seen three cases in which patients, who had long been the subjects of lupus erythematosus, finally had their shoulders spotted with little acne-like pustules, some of which assumed the conditions of lupus. In all three cases the scalp had been affected. I do not think that this condition on the shoulders and back has ever been described, and it is one of great pathological interest and importance. When lupus spreads on the hairy scalp, it is probably an affection chiefly of the adjuncts of the hair-follicles; in other words, it is an ally of sycosis. Now, when these spots to which I refer appear on the shoulders, they are obviously of the acne kind and are developed from sebaceous glands. They affect precisely the localities in which acne occurs. It is, therefore, not at all improbable that they result from infective elements derived from the sebaceous glands on the scalp. The first of the three cases to which I allude was that of a young woman who had been under Dr. Colcott Fox's care, and who was brought to me by an artist who was anxious to make a sketch. With Dr. Fox's permission a drawing was made, which I now possess. It shows the back of the neck and upper part of the shoulders covered with little papules. In this case none of the spots were pustular, and the patient had no special tendency to common acne. Dr. Fox was much interested in the case, and took the patient to the Dermatological Society.

My next case was that of a gentleman named G—, who had suffered from boyhood from a very severe form of lupus erythematosus of the scalp. He was about 25 years of age when he came under my care. I had had him under observation for more than a

year, when he one day told me that he had some spots on his back. He had been liable to acne more or less for years, and was accustomed to take but little notice of the spots on his back, which had only lately given him trouble. On making him strip I found the conditions, which are well shown in a portrait which I possess, and of which there is a duplicate in the College of Surgeons' Museum. Scattered amongst many little pustules, which could not be distinguished from common acne, there were a few patches, the size of a sixpence, made up of groups of little red lichen papules, which were clearly infective. Some of these showed evidences of scar formation, and others little tufts of dilated capillaries, exactly resembling those on his scalp. The patches, which I have described, are seen in the portrait, one on the back of the neck, one just behind and below the left acromion, another on the same side near the posterior border of the scapula, and three or four on the right side of the back and on the back of the right upper arm.

My third case is that of a lady named T——, whom I have had under care for lupus erythematosus, affecting both the face and scalp, for the last six or seven years. All her patches of lupus are now in a condition of healthy scar, with the exception of one very little one on her cheek. Cure has been effected by repeated cauterizations. She has lately been very liable to flush in the face, presenting conditions not to be distinguished from acne rosacea. Upon her shoulders, however, there is a number of little acne spots, which, spreading at their edges, have taken on the conditions of lupus. They are exactly like those delineated in the portrait which I have described.

These cases appear to me to have especial interest as illustrating the general law that infective elements, set free by disease in any one tissue or viscus, tend to find their home and to develop in some analogous structure. On this theory I think we may plausibly explain how it is that the sycosis-lupus of the scalp is attended by acne-lupus of the shoulders. As yet I have only seen the shoulders affected when the scalp suffered, but it is very possible that if we were to examine more frequently the shoulders of other patients suffering from lupus erythematosus, we should find that the conditions I have described are not very uncommon. In many forms of lupus erythematosus the sebaceous glands are very definitely affected.

THE USE OF KRISTALINE IN DERMATOTHERAPY.

BY LESLIE PHILLIPS, M.D.,

Surgeon to the Birmingham and Midland Skin and Lock Hospital.

KRISTALINE is the name given to a proprietary lacquer manufactured in America, but procurable in England. It is a celluloid varnish, and is used in the arts to give a transparent and indestructible protection to metal ornaments in the form of a protective film which prevents the metal from corroding. Chemically it is a solution of pyroxylin in wood-naphtha or pyroxylic spirit (methylic alcohol). From its smell it is manifest that it contains amyl acetate, which is also a solvent of pyroxylin. From this it will be seen that in composition and use kristaline is strictly analogous to collodion, but from a surgical point of view I have found it possess very manifest advantages over that valuable, but in many respects unsatisfactory, substance. The facility with which the stopper of the bottle in which collodion is kept becomes immovably fixed is equalled by the readiness with which the solvent evaporates, rendering the substance useless. Kristaline, on the other hand, is free from these small drawbacks. The bottle which I have used for the past two years has a broken and defective stopper, but this has not led to the inspissation or deterioration of the contents. When applied to the skin, the solvent evaporates more slowly than is the case with collodion: from this it arises that the application is more manageable, and in practical use lends itself to more deliberate handling, while it produces a far more satisfactory film. It would be approximately correct to say that where seconds are required for collodion to dry, minutes are taken by kristaline. What makes this substance of especial value is the character of the film. It is perfectly transparent, flexible, and durable. Applied, for instance, to the face, it is absolutely homogeneous, transparent, colourless and invisible, and for this reason is appreciated by patients when the application of such a varnish is

necessary. As applied for artistic purposes, the manufacturers claim for it that it deserves the name of an enamel rather than of a lacquer, since for hardness, toughness and unalterability it excels all similar varnishes, while a protective coat or film, given by dipping the article in it and drying, is invisible even on the finest engraved surface.

The pungent odour of kristaline, due to its contained amyl salt, is a disadvantage, and for medical purposes it would be well if it could be supplied without this drawback. The substance is much cheaper than collodion, being about ten or twelve shillings a gallon.

Flexile kristaline may be made in the same way as flexile collodion (kristaline 12 parts, Canada balsam $\frac{1}{2}$ part, castor oil $\frac{1}{2}$ part); but for many conditions the proportion of castor oil may be increased with advantage. For example, a good white varnish may be made thus:—

Kristaline	.	.	.	.	3i
Castor oil	.	.	.	.	3i
Oxide of zinc	.	.	.	.	3ii

A useful skin-coloured varnish or enamel may be made thus:—

Kristaline	.	.	.	.	3vii
Castor oil	.	.	.	.	3i
Raw umber	.	.	.	.	gr. 2
Red Armenian bole	.	.	.	.	gr. i
Zinc oxide	.	.	.	.	3ii
Calamine	.	.	.	.	3i

The solvent powers of kristaline are considerable, pyrogallic acid, chysarobin, sublimate, and other drugs being dissolved readily. Solution of pyrogallic acid (1 in 8) should be dispensed in blue glass bottles and kept from exposure to light.

Salicylic acid dissolves in kristaline in the proportion of nearly a drachm to an ounce; but after the lapse of a day or two some of the acid separates in long acicular crystals. When such a varnish is required for its keratolytic action it is better to add castor oil in the proportion of one to four of kristaline. Two parts of kristaline with one part of castor oil mix perfectly, but form a soft, greasy film.

The object of the present note being merely to direct attention to the convenient properties of kristaline as a basis in substitution for collodion, traumaticin, &c., the various uses of skin varnishes need not be mentioned here; but it may not be out of place to enumerate some of the diseases in which I have found this substance useful as a

basis :—*tinea tonsurans*, *verruca*, *eczema marginatum*, *lupus erythematosus*, *tubercular syphilides*, *acne*, *acne rosacea*, *callosities*, and *keratoses*.

There is one practical use of kristaline to which attention may be directed. Cases of *acne* are not very rare in which a large number of the spots are placed close together. The disease in these cases may be confined to one part of the face, and not unfrequently the chin only is affected. The disorder may continue thus localized for years without manifest extension, but recurrent inflammation and pustulation in the area of the disease are very trying to the sufferer. Those cases in which the lesions are closely agglomerated are not easily benefited by the applications in ordinary use, but are easily cured by the following proceeding. Over the whole affected region brush lysol, and allow it to remain on for one or two minutes. Remove by dabbing with blotting-paper. Now cover the part with a thin layer of kristaline applied by means of a penholder or stick. The advantage of lysol over carbolic acid or other caustics is that it produces a hyperæmia only, while the film formed by the kristaline is perfectly invisible. Unless friction is used, this film will last nearly a week, at the end of which time the disease will be found much improved. The process should then be repeated, and it will be seldom needful to again renew.

Kristaline is exceedingly useful to insulate part of an electrolysis needle when it is desired to confine the electrolytic action to the deep tissues and to prevent injury to the skin through which the puncture is made.

If kristaline is allowed to run over a sheet of warmed glass it dries into a beautifully thin film, as homogeneous and transparent as glass. This film forms the most admirable protective for wounds with which I am acquainted. Its appropriate name would be "celluloid film." I am not aware that this has as yet been produced for sale; one would, however, imagine that it has only to be known to be much appreciated as a surgical dressing.

Tracing-paper, such as is used by architects, is a useful addition to the writing materials of the dermatologist's consulting-room. By its means an observation on the size and outline of lesions, such as an ulcer or a disc of *lupus erythematosus*, is accurately taken; and by attaching the tracing to the case-book by means of a wafer a perma-

nent record of the shape and size of the lesion at the date is secured. The cellulose film may be used as a substitute for tracing-paper, and is, from its transparency, better adapted for some cases. The tracing should be made with ink.

The cellulose film forms the best and most convenient of all impermeable dressings, for its transparency allows the underlying skin to be as satisfactorily inspected as if no such dressing intervened. I have found that the best means of fixing such a dressing is to draw a line with kristaline on the sound skin outside the patch to be covered, allow it to partly dry, and to use this for the purpose of fixing the celluloid film cut to the proper size, afterwards covering the edge of the film with a further application of the fluid.

CLINICAL NOTE.

**KERATOSIS OF THE PALMS AND SOLES, PROBABLY DUE TO
ARSENIC.**

BY W. A. HARDAWAY, M.D.,

St. Louis, U.S.A.

A YOUNG gentleman of about 28 years of age was referred to me recently by his medical attendants, Drs. Bremer and Mulhall, for a peculiar condition of the palms and soles.

Both palms were affected, and to the cursory glance presented the appearance of a general thickening of the epidermis of a brownish colour, with here and there points of a much darker brown.

A more careful examination, however, showed that the surface was studded over with numerous warty elevations of various sizes and shapes, and, as just stated, of a decidedly darker hue than the surrounding skin. The thickening of the skin was limited exactly to the palmar aspects. To the touch the parts had a "shotty" feeling, even in those situations where the thickening appeared uniform.

On the backs of the hands, especially over the knuckles and finger joints, were a number of common warts. The tylosis of the soles was similar in every way to that on the hands, with the exception that the warty elevations were less numerous and somewhat larger. There were no warts on the backs of the feet. The nails were normal. There was no local sweating, and there was no obvious implication of the sweat-pores.

A careful examination of the usual sites of psoriasis showed no evidences of that disease, and, indeed, there was no history of syphilis or any other cutaneous disorder.

The affection had developed so insidiously that he could give but little information in regard to its early stages, but he was satisfied that the skin had been notably thickened for at least a year and a half.

Inquiry as to the patient's previous history developed the fact that for a number of years he had been suffering from what was pronounced to be epilepsy, and that for the past four years he had been taking four-minim doses of Fowler's solution three times a day, which, however, was combined with bromide of potassium.

The condition of the palms and soles resembled so strikingly the keratosis described by Dr. Pringle as presented by his patient,* and also the more recent case of Dr. T. Colcott Fox,† that I have ventured to report it as an example of the same affection.

It is true that bromide of potassium had been administered along with arsenic, but so far as is known that drug gives rise to no such symptoms.

Any one familiar with the clavi syphilitici of Lewin‡ would not look upon it as in any way similar; nor is there any resemblance between this disorder and the keratoderma erythematosa symmetrica of Besnier§ or the erythema keratodes of Brooke.||

For a fuller discussion of the subject with references to the literature, the reader may consult the articles just quoted, especially those that have appeared in this Journal.

CASE OF MELANOTIC SARCOMA OF LEFT EAR.

BY J. HERBERT STOWERS, M.D.

Physician to the Skin Department at the North-West London Hospital.

Charlotte H., aged 11 years, residing in London, was seen by me on the 27th October, 1892, in consultation with Dr. Godfrey, of Highbury, for an unusual pigmented appearance of the upper and middle portion of the pinna of the left ear, which had been first noticed in April, 1892.

The fossa of the helix presented a slightly uneven and verrucous condition of a dark slate colour, suggestive almost of artificial staining.

The growth could not be seen on the posterior part, but when

* *British Journal of Dermatology*, December, 1891.

† *Ibidem*, February, 1893.

‡ *Archiv. f. Derm. u. Syph.*, Jahrg., 1893, Heft 1-2.

§ "Internat. Atlas Rare Skin Diseases."

|| *British Journal of Dermatology*, November, 1891.

the pinna was turned forward a slight darkening of the skin was visible, evidently connected with, and of the same character as, the disease on the anterior part.

The remainder of the left ear and the whole of the right were normal.

No moles or pigmentary nævi existed about the face or elsewhere, and the disease was not observed to have been connected with any such growth previously existing. The lymphatic glands were not enlarged. The child suffered no pain or inconvenience in the part, and was unconscious of its existence until it was discovered by her parents.

The patient, though tall and well-grown for her age, was somewhat thin and anæmic, but of very intelligent disposition.

The family history afforded no evidence of clinical value, her father and mother (Germans) being still alive and in good health, and three of her grandparents having exceeded the ages of 78, 79, and 82 years respectively.

Her paternal grandmother died in childbirth at the age of 24 years. The patient has one sister, aged 10 years, living and in perfect health. Her only brother (the first-born) died of infantile diarrhoea at the early age of four months.

Previous to my seeing her Dr. Godfrey had applied the acid solution of nitrate of mercury with apparently good effect, but the disease was not arrested.

I have since made ineffectual attempts to destroy it by electrolysis, and later by erosion and the free use of nitrate of silver, the patient being under chloroform, but, despite our endeavours, the new growth has not been eradicated, and is very gradually increasing.

The use of the scoop (such as is used for the treatment of lupus) enabled me to obtain material for microscopic examination with the result that conclusive proof of the malignant nature of the growth exists.

I may add that not one of my fellow members of the Dermatological Society, to whom I have exhibited the child, nor I, have seen a corresponding case before, or since, and it was not until microscopic sections were secured that the nature of the disease could be unquestionably ascertained.

A complete representation of the facts has been made to the

parents, but they are strenuously opposed to further operative interference, which, owing to the nature of the case, is so urgently called for.

A coloured drawing was made on the 10th of February, *i.e.*, when the disease had been about ten months in progress, and another has been included, for public service, in the collection of pathological specimens at the Royal College of Surgeons.

Microscopic Characters.—Melanotic Sarcoma consisting of spindle cells, a great number of which contain pigment, and between which, in many places, intercellular substance is distinctly visible.

There is a marked tendency to the formation of alveoli, and cell "nests" are present as usually found in rapid growths.

July 20th, 1893.—I have this day excised the upper two-fifths of the ear, including the whole of the affected part (under chloroform), the patient having recently visited Berlin with her father, and the diagnosis being confirmed by two physicians there.

CASE OF MULTIPLE SKIN TUMOURS (FALSE NEUROMATA).

BY FREDERICK BAGSHAWE, M.D.,

St. Leonards-on-Sea.

J. Cox, æt. 20, was admitted to the East Sussex Hospital on November 1st, 1892.

Previous History.—Until 13 years of age patient had chronic cough, and about this time had a large abscess in left axilla. His work has been that of a ploughboy, and his intelligence is below the usual standard.

About three years ago he noticed that his skin was growing darker, especially over the neck and abdomen, and about this time he had persistent diarrhoea; he also commenced to vomit after food, and later copious vomiting occurred about every other day.

During the last three years he has noticed small lumps growing over his neck, body and arms.

During the last six months the symptoms have increased.

On Admission.—A very emaciated youth—weight, 5 st. 12 lbs.—complaining of constant vomiting after food and diarrhoea. His upper maxilla and alveolar margin overlap the lower to a marked

extent. T. furred and dry, motions loose, has a dull, almost typhoid look. The abdomen was enlarged and convex, the stomach much dilated, spleen enlarged. Under the skin of the abdomen, back, groin, neck and arms as far as the elbows are numerous hard, painless tumours, varying in size from that of a pea to a bean or larger. In the neck and arms they run in a chain, and have a cord-like feel.

10th November.—Vomiting has occurred three times in a week, and sarcinæ are abundant. A tumour now removed from the skin was the size of a bean. It had a saccular appearance, and exuded from the two extremities, shrinking considerably in size. It appeared to consist of a fibrous stroma with interspaces.

20th November.—Slight blood tinging of the sputa, probably from the gums; there is some bronchial catarrh. He was treated with bismuth and belladonna, and then with liq. arsenicalis (m iv)—gradually increased.

20th December.—Patient gradually gained flesh—6 st. 8½ lbs.—can take a little solid food, no diarrhoea, some bronchial catarrh, and tinged sputa. Urine sp. gr. 1008; no albumen, no phosphates.

26th January, 1893.—Patient had an attack of influenza with increased bronchial secretion and rise of temperature to 103° F.

3rd February.—Improved. Has had a large vomit, 60 oz.—weight 7 st. 6 lbs.

20th January.—Discharged. The tumours have become less visible, due to his gaining two stone in weight. Pigmentation as before.

J. Cox now went to St. George's Hospital, under Dr. Dickinson. While there a tumour one and a quarter inch long and half inch thick was found lying close to the median nerve, and was cut out by Mr. Rouse.

Dr. Rolleston reports that "there are a few nerve fibres, but the bulk of the tumour is composed of fibrous tissue, which in parts has undergone myxomatous degeneration. The tumour probably grew from the connective sheath of the nerve, and may be called a false neuroma."

This patient was exhibited at the Dermatological Society on 8th March, 1893, where great differences of opinion were expressed as to whether the growths were neuromata or so-called "molluscum"

fibrosum. Their linear arrangement alluded to in the arms was in favour of the former view, but against it were the facts (1) that their linear nerve distribution was by no means constant, (2) that they were painless, and (3) that there were present several soft tumours, collapsing under the fingers, such as form an integral part of most cases of fibroma molluscum. To some members the pigmentation seemed also to support the latter view.

25th July.—He attends occasionally at the Hastings Hospital, and remains in much the same state, although thinner.

TWO CASES OF HERPES ZOSTER OF PERIPHERAL ORIGIN.

BY T. C. RAILTON, M.D., LOND., M.R.C.P.,

Physician to the Manchester Clinical Hospital for Women and Children.

THE *first* case was observed in the person of a healthy girl of five years, who was brought to the Manchester Clinical Hospital on August 4th, 1892. Her mother stated that an eruption had appeared upon her left hand four days previously, the child remaining, with the exception of some little headache and restlessness, perfectly well. The hand was found to be slightly cedematous both back and front, the natural hollow of the palm being partially effaced, and a number of clusters of vesicles surrounded by erythematous patches were distributed over the fingers and thumb, as well as upon the palm and dorsum of the hand. In about a dozen places the vesicles had run together so as to form flattened, irregular-shaped bullæ, which when pricked exuded a colourless fluid. In some parts of the hand the disease went no further than the erythematous stage. The child complained of no pain at any time during the eruption or subsequently.

Two days after her admission into the hospital, red papules situated on an erythematous base appeared upon the anterior and posterior surfaces of the left arm and forearm, chiefly upon the ulnar side. A few minute vesicles were dotted here and there upon the reddened patches, and one cluster of three or four bullæ was seen on the upper and inner aspect of the arm near the axilla. On the same day were noted a small patch of erythema upon the anterior axillary fold, one

spot upon the posterior axillary fold, and two small patches over the scapula.

No further development took place and the child was discharged from the hospital in the course of another week, quite well.

The *second* case was that of a lady about 38 years of age, who consulted me on December 8th, 1892, on account of tingling and pain down the right arm to the hand, especially about the junction of the metacarpal bone of the thumb with the trapezium. The pain had manifested itself the day previously, and at the time of her visit to me there was a small group of vesicles situated upon a reddened base at the junction of the metacarpal bone and carpus just named. There was no other symptom of illness.

Twenty-four hours later another group of vesicles appeared upon the anterior aspect of the forearm in the bend of the elbow, and later still (December 11th) one group showed itself over the deltoid and another upon the external surface of the arm below the insertion of that muscle.

In the course of a few days the eruption disappeared, but the discomfort remained for some time afterwards in the form of a somewhat severe neuralgic pain over its site, which took the place of the previous tingling.

REMARKS.—The distribution of the rash in the first case clearly shows that no nerve of the upper extremity entirely escaped, though the branches which spring from the lower cord of the brachial plexus were more involved than the rest.

It is interesting to note the distinctly centripetal progress of the eruption in the two cases, the parts farthest away from the centre, and consequently offering the least resistance, being the earliest and the most severely affected.

The total absence of subjective symptoms in the first case and the pain attendant upon and following the eruption in the second, are not remarkable, it being well known that herpes zoster, though a painful disease in adults, is almost invariably unattended by pain in children.

Both cases are somewhat rare, as regards the seat and the progress of the disease, and they thus appear to be worthy of this brief record.

CURRENT LITERATURE.

COLLOID DEGENERATION OF THE SKIN. (*J. Cut. and Gen.-Urin. Dis.*, February, 1893.)

Dr. G. H. Fox reproduces a photograph of a very interesting case of somewhat doubtful nature. A coachman, aged 82, suffered from an eruption of numerous nodules, varying from a pin head to a split pea in size, occupying the cheeks, chin, the space between the eyebrows, and the upper border of the right ear. The smaller lesions were firm, flattened, dull red. When numerous near the nose there was some tendency to scaling. The rounded lesions had a transparent "apple jelly" appearance, with a whitish point at the summit. Some were slightly umbilicated. The larger lesions were softer, and when aggregated exuded on rupture blood and pus. There was no clue to syphilis, and no disordered sensation. Duration, six weeks; onset acute with some swelling of the face. Some lesions disappeared spontaneously. The author made the provisional diagnosis of *acute disseminate lupus*, but afterwards considered it as *colloid degeneration of the skin*. Dr. G. T. Elliot examined a lesion microscopically and found the tissue of a *decided tubercular character*.

T. C. F.

MULTIPLE BENIGN CYSTIC EPITHELIOMA OF THE SKIN. (*J. Cut. and Gen.-Urin. Dis.*, December, 1892.)

Dr. J. A. Fordyce describes two cases in a mother and her daughter. Papule were first noticed on the left temple and forehead of the daughter about the age of 18 years. The papules were firm, painless, movable, translucent, pearly-looking, so that some simulated vesicles; others had a faint yellow tint less pronounced than in xanthoma; most differed but little in colour from the surrounding skin. A central depression in some caused a simulation of molluscum contagiosum. The numerous lesions were imbedded in the skin, but projecting; mostly discrete but confluent in a few places; in size from a pin head to a split pea; distributed over the forehead, temples, eyelids, cheeks, nose, behind and below the ears, back of the neck and through the hair, in the interclavicular regions and upper portion of the chest. The majority of the larger growths were covered with minute capillaries and, intermingled with the lesions, telangiectases and minute pigment spots were found. A great number of white lesions like milium were also scattered about, and such lesions were contained in many of the larger epitheliomata. In the mother the disease began at the age of 15 years. The features of the eruption were similar, and also the distribution, except that the scalp appears to have been free, but the ears and back of the trunk involved. After 80 years lesions were still evolving.

Histological examination showed that adenoma-like cell masses, distinct or

intercommunicating, composed of epithelial cells like those of the lower layers of the epidermis, extends from just beneath the epidermis to, in some cases, the region of the coil glands. In some sections the epithelial cells were densely packed together without a distinct structure, in others they formed ramifying linear tracts, two or more cells wide, like a coil-gland duct but without a distinct lumen. Some cell masses contained "pearls" and "nests" in all stages of development. Cysts were seen surrounded by laminated cells containing keratohyaline enclosing dark brown or almost black granular pigment or detritus, or entirely empty. Some of the cell masses bore a striking resemblance to glandular tissue, but the absence of an external limiting membrane seemed to negative this origin. Some sections disclosed a direct down-growth and proliferation of the epidermis and also of the external root-sheath of the hair-follicle. The sebaceous glands and coil-glands were healthy, but the latter were diminished below the normal number or were absent.

The author appears to adopt the idea now generally received that the tumours are formed from collections of cells, at one time destined to form sweat-glands, derived from the stratum Malpighii, cut from the germinal layer and retaining their embryonic nature until brought into activity through some influence during the development of the individual. Dr. Fordyce's cases should be studied in connection with those recorded in the *British Journal of Dermatology* shortly before by Brooke.

T. C. F.

"PRICKLY HEAT." (*J. Cut. and Gen.-Urin. Dis.*, February, 1898.)

S. POLLITZER studied the histology of "prickly heat" from specimens removed from eight cases during the summer. Two of the patients were infants, the others ranged from adolescence to old age. In the cutis there were apparently no changes, except perhaps that the lumina of the coil-glands appeared at times unusually wide. In the papillary layer the capillaries seemed well filled, and often there was a slightly increased peri-vascular leucocytic infiltration, especially when the eruption had existed some time. The rete cells showed no changes, and though the intercellular lymph-spaces appeared distended, there was a striking absence of emigrated white blood-corpuscles among the cells. Here and there in the rete were large oval or circular cyst-like spaces, which proved to be sections of dilated sweat-ducts, and were frequently arranged in an oblique line one over the other. Sometimes there was only a single cyst with a section of a but slightly dilated sweat-duct below it. The contents of these spaces was at times almost wholly fluid, containing a fine granular matter and very few epithelial and round cells: at times the cellular elements were present in considerable numbers: at times the entire space was filled with closely packed epithelial and round cells and fragments of nuclei which stained intensely. When the vesicle appeared in the upper region of the epidermis its floor was generally made up of the cells of the stratum granulosum. The stratum corneum was almost everywhere thickened on account of a swelling of the individual cells, and the nuclei were often preserved. The uppermost layers of the stratum corneum were frequently lifted up by fluid constituting a vesicle, usually with clear contents. Pollitzer could not find a papule clinically or histologically. The cystic dilatation of sweat-ducts is the main change. The cysts, he says, are retention-cysts, and evidently due to some occlusion

of the duct at some point external to the cyst, *i.e.*, in the upper layers of the stratum corneum. The obstruction is probably caused by the swelling of the imperfect corneous cells. These cells are abnormally free from fatty matter, otherwise they would not imbibe fluid and swell. Thus the greasy skin of the negro does not suffer. On this theory Pollitzer recommends as a preventive that the skin should be anointed with lanolin.

The reporter cannot subscribe to the statement that "prickly heat" never occurs on the face. It is quite common to see the faces of rickety infants in hot weather covered with Miliaria rubra, as distinguished from the vesicular eruption called Sudamina in England.

T. C. F.

IMPETIGO HERPETIFORMIS. Dr. WILLIAM DUBREUILH, Bordeaux. (*Annales de Dermatologie*, 1892.)

Dubreuilh opens his paper with an historical sketch of this rare skin affection, which F. v. Hebra first described in 1872. His observations were based on five cases, all occurring in women either pregnant or recently confined. Of these only one recovered, and possibly only temporarily. Dr. Dubreuilh proceeds to quote *verbatim* Hebra's classical description of the disease which has served as a standard for all cases that have occurred since then. Duhring viewed Hebra's cases as pustular varieties of bullous eruptions, and included them under his group Dermatitis herpetiformis. Kaposi, in 1887, strongly combated such a classification, and insisted on the well-defined characters of Impetigo herpetiformis:—the miliary pustules, distinct and grouped, on an erythematous base, the centrifugal progress of the eruption, the absence of ulceration and cicatrization, the predominance and beginning of the disease in the genito-crural regions, its frequent occurrence in pregnant women, its subacute course accompanied by profound disturbance of the general health, and its often fatal issue.

Impetigo herpetiformis has been observed by Kaposi once in a male, and Dubreuilh's case was also that of a man, *ætat.* 53. Hitherto all the cases that have occurred, or, rather, that have been recorded, have been Germans.

Dubreuilh gives then, in full, the histories of ten cases. Six of these have occurred in the practice of Prof. Kaposi, three were described by Geber, Maret, Du Mesnil and Marx respectively, and the last and tenth occurred recently in the St. André Hospital, Bordeaux. Kaposi's cases had never been published *in extenso* before, but they formed the subject of his memoir on Impetigo herpetiformis. Of these ten cases, two were males—both died; of the eight females, the eruption occurred during the last three months of pregnancy in four, during the last five months in three, and in one (the first attack) pregnancy was not present at all; in two other attacks pregnancy of early date was stated to have been present. In four of the eight cases miscarriage occurred, and in three women the disease ended fatally. As a rule the infant died, and in one case only it presented an eruption similar to that of the mother; both, however, recovered.

Out of twenty-four cases (seventeen patients, including the five patients of F. v. Hebra, two of Kaposi's, and the ten whose histories Dubreuilh gives *in extenso*), eleven recovered and thirteen died.

Morbid Anatomy.—The internal organs failed to reveal any cause that might account for the gravity of this affection. Some cases revealed intestinal and

pulmonary tuberculosis by no means advanced, and in one case syphilitic disease of the liver and kidneys is stated to have been present. The skin has been thoroughly examined during life histologically by Du Mesnil and Marx, who made the following observations. In the erythematous area the blood-vessels and lymphatics were greatly injected and surrounded by round-celled infiltration. The latter is especially abundant at the base of the pustules. The interpapillary processes of the epidermis are widened and prolonged, and the structure of the derma is obscured by the abundance of round cells, which completely obliterate in the pustular area the line of demarcation between the *pars papillaris* and the malpighian layer. The prickle-cells are no longer distinguishable, and the purulent elements have permeated these, raising the horny layer which acts as a delicate cap to the pustule; the base of this is constituted by the columnar cells of the epidermis. The sudoriparous glands showed nothing abnormal; in the vicinity of some of the coils there was evidence of round-celled infiltration. As regards the size of the pustules Dubreuilh finds, in opposition to Du Mesnil, that the smallest are deepest, *i.e.*, in the malpighian layer, and the largest occupying the situation of the stratum lucidum, or even the lower strata of the horny layer. In the immediate vicinity of the pustules the malpighian layer was apparently diminished by three or more cell-layers; and the nuclei of the cells traced towards the surface in many sections were still readily recognized.

Etiology.—F. v. Hebra attributed impetigo herpetiformis to a blood infection originating in the uterus; on the other hand no other signs of pyæmia in the internal organs were present. Maret regarded it as an infective disease peculiar to pregnancy, Du Mesnil as the result of disturbed innervation. There is no doubt that pregnancy does predispose to the affection, for where recovery has taken place and been followed again by pregnancy, impetigo herpetiformis has reappeared and been fatal.

Bacteriological researches have produced no positive results. Maret thought he recognized staphylococcus albus in his cultures from the blood and pus, which, however, on inoculation in a rabbit, yielded no results. Du Mesnil and Marx discovered in the contents of the pustules myriads of staphylococcus aureus and a yellow sarcina, micro- and diplo-cocci. Inoculation experiments with cultures gave negative results. In skin sections Dubreuilh only found micro-organisms in the pustules, not in the epidermis or dermis anywhere. In short, nothing is known about the nature of this affection. Du Mesnil's opinion is purely hypothetical, and the infective character of the disease is not proved.

Diagnosis.—*Herpes gestationis*, which Duhring at first (now no longer) regarded as a variety of, if not identical with, impetigo herpetiformis, and consequently brought within his class dermatitis herpetiformis, is quite distinct. The polymorphic eruption, the pruritus, the maintenance of the general health, differentiate this disease from impetigo herpetiformis.

From *pemphigus*, as defined by Besnier and Doyon in their annotated translation of Kaposi's work on Diseases of the Skin, Dubreuilh considers impetigo herpetiformis is easily distinguished. On the other hand, where pemphigus is used *latiori sensu*, such bullous eruptions, in addition to the absence of a well-marked erythematous base, last longer, and it is only owing to their duration that the general health becomes affected. As a rule the fluid of the blebs is clear, or but slightly turbid. These points are sufficient to distinguish the two affections.

Pemphigus vegetans (Neumann) has been confounded with impetigo herpeti-

formis by Auspitz and Zeisler. The former begins in the nasal and buccal mucosæ, causing great discomfort. It often remains confined to these regions, and when it generalizes, the blebs of pemphigus are typically produced. In later stages the excoriated surfaces vegetate luxuriantly, resembling condylomata, especially in the axillæ, groins and between the buttocks. The mucosæ never show such vegetations, which, however, may attack the nail bed, detaching the nail in the process. It attacks both sexes equally, and is uninfluenced by pregnancy.

In impetigo herpetiformis the buccal eruption is altogether inconstant, and when present slight, and not causing any distress. In one case (recorded by Du Mesnil and Marx) vegetations appeared at the sites of the pustules, but were much less marked than those of pemphigus vegetans. Lastly, although the mortality in both diseases is the same, the duration of impetigo herpetiformis is much shorter.

Lastly, Hallopeau has described two cases of what he calls *chronic pustular dermatitis developing centrifugally and in patches*. These were shown at the Paris Dermatological Congress. The pustules rest on a red indurated base, and occupy the hypogastric and genito-crural regions. As they extend the centre becomes covered with a crust, which falls off, leaving a pigmented infiltrated surface beneath. This eruption is accompanied by intense pruritus, and the disease may last months, or even years, without affecting the general health.

Treatment.—The continuous bath has relieved the symptoms more than any other method, and apparently has contributed the cure of those that have recovered.

FRANK H. BARENDT.

A REMARKABLE CASE OF HERPES ZOSTER UNIVERSALIS. Dr. PRO COLOMBINI, Assistant in the Dermatological Clinic of the University of Siena. (*Commentario Clinico delle Malattie Cutanee e Genito-Urinarie*, Nos. 1, 2, 3, 4, Siena, 1898.)

DR. COLOMBINI describes at length a very rare manifestation of Herpes Zoster. It was universal, and "mapped out" the cutaneous nerve distribution of the whole of the body. Two excellent coloured lithographs, executed at the deaf-mute institution at Siena, showing the anterior and posterior aspects of the body in the erect position, reveal at a glance the nature of the affection. As far as is known only three cases have hitherto been recorded where Herpes Zoster has implicated the whole of the integument: I. De Amici's case, reported in the *International Journal of Medical Sciences*, Fourth Year, 1882, p. 72; II. Pennetti's case, following influenza, *Riforma Medica*, Sixth Year, 1890, Vol. I., p. 788; III. Pugliesi's case, *Riforma Medica*, Seventh Year, 1891, Vol. II., p. 689.

Dr. Colombini's case is that of a young man, *ætat.* 30, a peasant by birth and occupation. Parents healthy, as also the other members of the family. When 27 he had malarial fever, which lasted some months, leaving him very weak; he had no skin trouble or any neuralgic affections. He had another attack of malaria, the present one, when he was 30, and this time suffered from intense neuralgia, and from a burning sensation all over the body. Within a week of the onset of the malaria his skin was affected with universal herpes zoster, and it was at this time that Dr. Colombini saw him. The neuralgia was very severe, he was feverish, and the skin presented in the various cutaneous nerve areas patches of erythema

with congeries of vesicles in various stages of progress—in short, the typical eruption of zoster. The conjunctivæ, nasal, oral and anal mucosæ also showed vesicles. The rash was bilaterally symmetrical, the right half of the body being worse than the left. There was everywhere a diminution of common sensation in the erythematous areæ, and local discomfort due to the implication of the orificial mucosæ.

There was a large amount of albumen present in the urine during the first few days. It gradually disappeared as the rash improved. The spleen was distinctly enlarged, and the febrile paroxysms were typically malarial in character. The treatment was, internally the administration of quinine, locally boric lotions, boric collutoria, boric collyria. During convalescence arsenic was given to combat the persistent neuralgiæ in the various regions, especially in the trifacial nerve area. He was under treatment for six weeks. The contents of those vesicles which had become purulent revealed staphylococcus pyogenes aureus in predominating numbers. Besides pus corpuscles, Colombini was able to satisfy himself that certain Marchiastellate bodies were present, clearly recalling to mind similar forms described by Fava and Celli as constantly present in the blood during paludal paroxysms. According to these observers these forms represent the second or reproductive stage of the plasmodium malarix.

Dr. Colombini proceeds to discuss the diagnosis; but a glance at the two illustrations clearly show that the affection could not be mistaken for either eczema universalis or pemphigus acutus (with millet-like blebs). Finally he comes to the question of ætiology; this he goes into thoroughly, and on the strength of this case more especially, Colombini concludes:—

1. Zona or zoster is a general, febrile, spontaneous, acute and almost cyclic (*i.e.*, running a definite course) disorder, ending always in recovery and conferring immunity. It is a general affection with a circumscribed local manifestation.

2. The characteristic feature of zoster is rather the specific neuropathy that produces the cutaneous eruption than the eruption itself. It is not enough simply to refer zoster to trophic disturbance; on the contrary it must be regarded as a specific neuropathy.

Dr. Colombini distinctly refers his remarkable case to the consequences of malaria in an over-wrought subject.

FRANK H. BARENDT.

AUTOTOXIC KERATODERMATITES. Professor PIERLEONE TOMMASOLI, Royal University of Modena. (*Monatshefte für praktische Dermatologie, Ergänzungsheft I.*, 1898.

PROFESSOR TOMMASOLI prefaces his subject with a new classification of diseases of the skin. This is of purely academic interest, and beyond giving an insight into his views, does not increase our knowledge of dermatology in general.

The keratodermatites are those diseases in which the stratum papillare and the epidermis are more or less implicated, resulting primarily in hypertrophy, secondarily in dystrophy of the horny layer. He divides the keratodermatites into (*α*) those caused by external agents, and includes the well-known epiphytic diseases—favus, tinea tonsurans, pityriasis versicolor, &c. The second division comprises (*β*) those affections caused by internal, or internal and external, agents combined. This latter division forms the subject-matter of Tommasoli's study, and includes

diseases which it is the object of most dermatologists to distinguish sharply both ætiologically and clinically, one from the other. Thus keratosis pilaris of Brocq, psoriasis, comedones, lichen scrophulosorum (Hebra, senior), pityriasis rubra pilaris, the chronic stages of eczema, ichthyosis and many others are, all of them, brought together under this second division (β).

Tommasoli considers that he is thus justified by the following theory, which he argues is as free from grave objections as any other that has hitherto been propounded. He believes that certain toxines are generated within the individual, and are the immediate exciting agents in the production of these various skin disorders. Hence his term—autotoxic keratodermatitis. Of these toxines—the peccant humours of humoral pathology—he tells us nothing definite. Tommasoli assumes that they must vary greatly in quantity, quality, and combination, to produce so varied a clinical picture. He discusses the parasitic, the neuropathic and diathetic theories at length, but finds them all wanting in elucidating the problem of causation. Tommasoli supports Kromayer in the view that the epidermis and stratum papillare should be looked upon in the light of a parenchyma and stroma (*e.g.*, hepatic tissue lobular parenchyma and stroma). In a paper on the ætiology of ichthyosis, Tommasoli has already shown that vascular changes predominate *ab initio* and that the disturbance of the process of cornification is a secondary consequence. Using these observations as a basis and reciting the histology of the various keratodermatitis, he infers that the vascular disturbances (always present if carefully looked for), brought about by toxines, cause all these disorders. He cites various clinical observations—*e.g.*, interchange of skin affections in the same individual, the presence of keratodermatitis in relations of the patient, the predisposition to certain general diseases, rheumatism, gout, uræmia, and allied disorders, &c.—to support his view of autotoxicity.

Finally he criticizes his own theory and concludes that there are many points which might have been elucidated, had dermatologists of late bestowed greater attention to the action of toxines, and more especially to the larger question of bio-chemical changes, which produce these bodies.

Professor Tommasoli's monograph is of value even if it only makes us pause in our tendency now-a-days to ascribe so many disorders of the skin to parasitism, and induces us to consider, from an "internal" standpoint, our ætiological problems a little more closely than has hitherto been done.

FRANK H. BARENDT.

EPIDERMOLYSIS BULLOSA HEREDITARIA. (Köbner.) Dr. F. BONAIUTO.
(*Il Morgagni*, Anno XXII., Dec. 1890.)

GOLDSCHIEDER first described this affection and Köbner gave it its present title. Both observers drew attention to its hereditary character, and Dr. F. Bonaiuto gives details of a patient whose history reveals its presence in five generations. It attacks males as well as females, with a slight preponderance in favour of the male sex. Goldscheider termed the disease acantolysis bullosa, a name which Bonaiuto does not deem sufficiently distinctive.

Bonaiuto's case was that of a male who had suffered more or less—in warm weather especially—ever since he could remember from this skin trouble, which he stated voluntarily, affected other relatives.

The eruption appears wherever pressure or friction from clothes exists. It is

almost always seen on the soles, especially over the metatarso-phalangeal joint of the great toe, scattered over the dorsum of the foot, and over the malleoli. It also affected the hands. In fact the hands and feet were more often the seat of the efflorescences than elsewhere. A typical efflorescence consists of a bleb varying in size with the mechanical agent, with a rosy halo of one to two millimetres in breadth. The contents of the bleb in the early stages are serous and glutinous: later on they may become purulent, if ruptured, and are covered with a thin scab, under which healing takes place. Before the efflorescence appears, redness, accompanied by severe pruritus, is observed: the bulla increases for two or three days, and then gradually diminishes. Its roof is then shed, and underneath the epidermis is sound. The whole process lasts from six days to a fortnight. The patient's general health was good and no functional disturbance existed; although only 22 he had canities precoc. During the winter he was much less troubled, or rather the mechanical agent required a longer time and to be more irritating to produce the eruption.

Bonaiuto gives a short resumé of the cases hitherto recorded. Valentin's (9 males, 8 females); Goldscheider's (2 males, 8 females), and Bonaiuto's (16 males, 15 females).

Microscopically, the bleb occupies the horny layer; it does not implicate the rete mucosum, unlike pemphigus. No organisms could be detected in the contents or in the cells. Treatment so far has only been palliative; no cure has been effected. The chief point is to preserve the bleb-wall intact, and if this fails, to ward off suppuration by the application of antiseptics. As preventive measures, the application of fatty substances to the skin, bathing as little as possible, and the diminution of friction by copious dusting powders are useful. Köbner mentions amongst other causes, the garter of the stocking, the pressure of a ring on the finger, the leaning on the forearms, and sitting in the same position for some time. Bonaiuto has seen bullæ in the balano-posthal groove after coitus. Sometimes these causes would be sufficient; at other times apparently not even the pressure of the military belt, worn during the manœuvres, coupled with long marching, produced any eruption. In some of the cases, the males were exempt from military service. Valentin calls the affection *Dermatitis bullosa*; there is, however, no inflammatory sign about its evolution, and, moreover, the stratum papillare and rete mucosum are unaffected.

Bonaiuto calls attention to the blisters (vulg. "segs") which are frequently seen after any severe manual exercise (rowing, gymnastics), in those whose hands are not accustomed to it, and he considers that in cases of epidermolysis bullosa hereditaria, a similar condition is produced by mechanical pressure, much too trivial to have any effect in ordinary individuals. Chemical means, *e.g.*, tincture of iodine, acetic acid, and a sharp blow, do not produce the eruption.

FRANK H. BARENDT.

NÆVI AND NÆVO-CARCINOMA. P. G. UNNA, of Hamburg. (*Berliner Klin. Wochenschr.*, 1898.)

THIS contribution is founded on the author's conviction, after a long study of moles, that the well-known cell groups of the soft button-shaped nævi are formed of cells of a peculiar kind. Owing to the unsatisfactory results of the ordinary methods for staining, the cells have never sufficiently been classified simply as

connective tissue or endothelial cells. They more closely resemble epithelial than connective tissue cells on account of their incapacity to form intercellular substance.

Unna was, as he believes most observers of the present day are, of the mistaken opinion that the malignant tumours which develop, especially after an injury from pigmented moles, generally belong to the sarcomas. The first case of this kind which Unna investigated, and which was given to him as a specimen of a sarcoma, proved in an unexpected manner to be a good example of carcinoma, and even a carcinoma of alveolar structure.

A description is then given of the histological character of the alveolar structure, in which he says it is certain that, through the want of these epithelial fibres, a tendency is produced in them to isolate or scatter the younger epithelium, which is not generally found in skin cancer.

Unna next discusses the question as to whether these cells were really true epithelial ones, and reference is made to Tennent's case, which was published in the *Glasgow Medical Journal* in 1885, which he had opportunities of examining for himself, and which he proved to consist of large polyhedral cells, with beautiful oval nuclei and a pigmented mass of such cells without any intercellular substance; so it was really a case of pigmented carcinoma. In a case he investigated of a pigmented nævus taken from a newly-born child, he showed that the nævus cells in question were really genuine epithelial ones, which had separated from the epithelial covering during foetal life or the first years after birth.

The whole separation, or dropping-off process, of the epithelium has a certain resemblance to the formation of alveolar carcinoma.

Unna remarks that, after this discovery, he much regrets he was not one of Cohnheim's school, for, not being one of the admirers of his theory of tumours, believing this to be only of importance for benign and not for malignant ones, for which the parasitic theory seemed to him of greater probability; Cohnheim's postulate of the superabundant unused embryo germs on the epidermis cannot be accounted for except by premature casting off of such germs of the epidermis in the connective tissues. It is possible to imagine such mesoderm germs in the shape of cell groups in the middle of the connective tissue already formed, but never such ectodermal structures on the epidermis, for the constant shedding of the latter must get rid of every germ of that kind. Unna considers that if Cohnheim wished to prove his theory regarding carcinoma he should have shown what he himself had succeeded in discovering.

W. KNOWSLEY SIBLEY.

CASE OF EPHIDROSIS CRUENTA. Dr. M'CALL ANDERSON. (*Glasgow Medical Journal*, May, 1898.)

A GIRL, twelve years of age, was attacked on the lip and brow, and subsequently on the arm, body and legs. The crops were successive, involving only a limited area at a time, the old patches never having entirely healed before new ones made their appearance. There had been hæmorrhages from the ear and nose, but she had never menstruated.

Each crop of the eruption is composed of several patches appearing at irregular intervals and preceded by a feeling of sickness; these patches are red, circumscribed and of varying diameter. After an interval of a few minutes to half an

hour, the central portion becomes intensely red, the corium appearing to undergo rapid solution, and a watery serum, which may be blood-stained, exudes. Near the margin a ring of deeper colour forms, which does not exude. Each patch remains out about an hour, then gradually fades, the exudation forming a scab which falls off in about a week, leaving pink cicatricial tissue which is for some time tender to pressure.

Two or more patches may come out together, and the whole crop usually appears within a few hours. The eruption does not itch, is only occasionally painful, and, where the exudation is only serous, it readily bleeds if touched.

The condition had lasted eighteen months, and on admission it was noticed that the long diameter of the old cicatrices corresponded with the long axis of the limb.

Treatment, at first, consisted in hot hip-baths with mustard and pil : aloes et ferri internally, and subsequently Carlsbad salts. The improvement was but slight, though the general health was good. Ergot of rye was then used and followed by a rapid diminution in the number of attacks.

Dr. Anderson adds that there can be no doubt but that this is a case of vicarious menstruation, and no permanent improvement is probable until that function is fully established.

H. W. MARETT TMS.

ATROPHIC ALOPECIAS. W. DUBREUILH. (*Annales de Dermatologie et de Syphiligraphie*, 1898, p. 829.)

THE author takes M. Brocq's note, published in 1888, as the basis of his paper. M. Brocq distinguishes four varieties of this affection; the author accepts three, but the fourth (keloid acne of the neck) he considers to be both clinically and anatomically different.

He details four cases of the first variety, "pseudo-pelade," in which the progress is slow, the lesion leaving a white cicatrix, and during their development they are irritable but not painful.

The remainder of the paper is taken up with references to and discussion of published cases of the remaining two varieties, viz., folliculitis decalvans and lupoid sycoosis, but the author does not add any more cases to the list.

H. W. MARETT TMS.

ANOMALOUS DEVELOPMENT OF COMEDONES AFTER SMALL-POX.

Dr. DE COQUET. (*Annales de la Policlinique de Bordeaux*, May, 1898.)

A WOMAN, æt. 45, had an attack of variola. Twelve months afterwards she was seen, and her face was found to be covered with a number of crusts, which on closer inspection were found to be extreme acne punctata. They were so numerous that the patient's face was quite unrecognizable, only small patches of healthy skin being found between the crusts, the eyes, anterior nares and mouth being alone exempt. The retained products of the sebaceous glands were black on the surface of the skin, and were mostly associated in pairs, with an interval of healthy skin, but uniting in a common canal below, thus forming a true sub-epidermic burrow with a double orifice.

Extirpation was proposed and carried out in the following manner:—A needle was pushed down the duct of a sebaceous gland, between it and the hardened

contents; lowering the handle of the needle, the comedo was raised by a lever-like movement, slight pressure being made on the neighbouring orifice; thus the whole of the contents could be withdrawn from the first orifice.

The author considers this process preferable to the methods generally adopted, by pressure with the nails or with a watch-key, as they are painful, and can only be practiced on a few at a time, in addition to setting up irritation of the surrounding parts thus pressed upon.

The excessive secretion of sebum he considers to be due to the anatomical changes consequent upon variola. There is deep-seated congestion of the cellular tissue and extravasation of leucocytes, and this stimulus causes increased secretion; the œdema and infiltration of the epidermis compress the orifices which are plugged by the thickened crusts. Moreover, the walls of the duct are thinned, and lose their power of expressing the contents.

Such is the explanation given by the author of the exaggerated production of comedones following on variola or other exanthem.

H. W. MARETT TIMS.

MULTIPLE CHANCRES. Dr. DE COQUET. (*Annales de la Policlinique de Bordeaux*, May, 1898, T. II. fasc. 9. No. 14.)

CASE.—A man, æt. twenty-eight years, with a soft phagadenic chancre of the penis, occupying the dorsal part of the preputial groove; the base was slightly infiltrated but not indurated. The inguinal glands were enlarged. In addition to this initial lesion there were seven others on the skin of the penis and six or eight on the scrotum. Just to the right of the anus was another ulceration presenting all the characters of a soft chancre. Eight others were situated on the scalp and one on the forehead, all on the right side, no doubt due to scratching with the right hand.

The one on the forehead was rounded and about the size of a lentil; the epidermis was destroyed and the papillary layer of the skin was attacked; it was covered by a scab.

In order to decide whether the ulcerations on the face and scalp were really soft chancres, two methods naturally suggested themselves, the clinical and the experimental.

The author detached with a lancet the crust covering the spot on the forehead and then inoculated the left forearm, and a second inoculation, near to the first, with pus from one of the ulcerations on the penis. Four days afterwards no effect was to be seen, only a slight excoriation due to the puncture.

In spite of this failure, from the clinical evidence and from the fact that inoculation from the penis gave no better result than that from the forehead, the author still considers all the lesions to be of the same nature, and thinks that the failure of inoculation should not negative other considerations.

He concludes by giving a short differential diagnosis between this affection and pustular acne, ulcerated syphilides, impetigo and ecthyma, from the last of which it is not easily distinguishable.

H. W. MARETT TIMS.

THERAPEUTIC NOTES.

THE INTERNAL TREATMENT OF LUPUS ERYTHEMATOSUS WITH PHOSPHORUS. L. DUNCAN BULKLEY, A.M., M.D. (*American Journal of the Medical Sciences*, April, 1898.)

AFTER giving tables showing the relative frequency of this affection as compared with *L. vulgaris*, the ages at which each occurs, &c., the author proceeds, in a short paper, to detail the treatment, which appears to be very successful, both in the acute and severe cases as well as in the chronic ones; and he states that in a very considerable number of cases he has seen the lesions "subside and entirely disappear under the treatment proposed," and in a number of instances the patients have been "under observation, in one way or another, for a length of time after treatment."

The form in which the drug is administered is in solution; thus—

℞ Phosphorus	grs. vi
Absolute Alcohol	3xxx

To be dissolved with the aid of heat and agitation and then mixed, while still warm, with the following mixture, also warmed—

Glycerine	℥i ss.
Alcohol	℥j ss.
Essence of Peppermint	℥ss.

Each drachm contains 1 grain of phosphorus.

The author finds this method of administration is not accompanied by digestive and liver derangements as when given in pill or in oily solutions. The dose is 15 drops in water (which should be added quickly and the dose taken at once, to prevent oxidation) three times a day after meals, and very gradually increased to 45 or even 60 drops, and continued until the lesions have disappeared and superficial cicatrization taken place.

If ill-effects should occur it may be temporarily replaced by full doses of nitric acid or acetate of potash and nux vomica with advantage. The author does not claim priority for this method of treatment, but states that it is not mentioned in any of the recent literature on the subject.

TREATMENT OF ECZEMA OF THE LOWER EXTREMITIES. DR. MILTON B. HARTZELL. (*Therap. Gaz.*, April 15, 1898.)

THE writer dwells upon the frequency, annoyance, and obstinacy of this complaint, without entering into any details as to their causation. He accentuates the necessity for the proper application of whatever remedies may be prescribed.

Where there is much moisture, redness and inflammation, the very mildest applications are recommended, *e.g.*, the employment of black wash, or a saturated solution of boric acid, followed by the pharmacopœal oxide of zinc ointment. The lotion should be dabbed on for five minutes and allowed to dry before the ointment is applied. When oozing is abundant the following paste is recommended:

R Pulv. Amyli.
Pulv. Zinci oxidi aa ʒii.
Petrolati ʒss. m

The advantage claimed for this paste is its adhesiveness. In removing it, soap and water must not be employed, but cosmoline must be abundantly applied and wiped off with a soft cloth. These applications should be made three or four times in the twenty-four hours. A lotion of ichthyol (15 to 20 mm. ad ʒi) is useful in less inflammatory cases, by lessening hyperæmia and diminishing discharge, but, unless followed by some soothing ointment, causes the skin to become dry, tender and painful. This latter condition is the usual result of the application of ichthyol in ointment form. When the skin becomes scaly and itchy the above paste, with the addition of 2 or 8 per cent. of salicylic acid, is often of great service, to which menthol or carbolic acid (gr. x-xv ad ʒi) may be added with caution if itching is intolerable.

Among recently introduced drugs, the preference is given to creolin incorporated in zinc ointment (m xv-xx ad ʒi). Where oozing is abundant, washing with a saturated solution of boric acid, followed by dusting with equal parts of zinc oxide and starch, is recommended, but nothing is better than the familiar calamine lotion. The necessity for employing tars with caution is enjoined; the writer applies the following with a flat camel's hair brush:—

R Ol. Cadini ʒi to ʒiij.
Ol. Amygd. dulcis ad ʒi. m

By alternating this application from time to time with an emollient ointment a cure is often effected in obstinate cases.

In the treatment of leg ulcers resorcin is warmly recommended to relieve pain, in the form of a 8 to 5 per cent. ointment. Oil or cosmoline must always be used to remove crusts or scales.

No mention is made of the therapeutic value of rest in such cases.

TREATMENT OF ACNE, ACNE ROSACEA, SEBORRHOEA, AND SYCOISIS. (DR. STELWAGON. *Therap. Gaz.*, February, 1893.)

AFTER an analysis of 278 cases of acne, in which the predominance of the disease between 15 and 25 years of age was very notable, Stelwagon recommends, after the removal of comedones, the use of the following, in addition to the usual sulphur lotions, *viz.*; (1) A saturated alcoholic solution of boric acid; (2) An aqueous solution of boric acid with 5 to 20 grains of sulphate of zinc to the ounce; (3) An aqueous solution of resorcin, 5 to 40 grains to the ounce.

He found sulphur and ichthyol ointments of much greater service than mercurials.

In Acne Rosacea (86 cases) systemic treatment on the usual lines was always

resorted to, ergot appearing to be the most potent drug in cases depending upon uterine trouble. Chief reliance, however, was placed on external treatment. Where active hyperæmia was prominent lotions or ointments of calamine, tannin, or boric acid were used, with one or more grains of sulphate of zinc in some instances. In more sluggish cases the applications used were the same as for acne. Where capillary hypertrophy was present simple multiple punctures or electrolysis were resorted to, and frequent repetitions were necessary.

In Seborrhœa (125 cases) the following lotions were used, viz., Resorcin (gr. x—xxv ad ʒi), or Thymol (gr.ss.—gr. ij ad ʒi), and the following ointments:—

R. Acid Salicylic, gr. v — gr. xxx.
Sulphur precip., gr. xxx — 3iss.
Adipis ad ʒi. m
R Hydrarg. Ammon., gr. xx — ʒi.
Acid Salicylic, gr. x — gr. xx.
Adipis ad ʒi. m

Oleate of mercury, 10–20 per cent., and Naphthol β (gr. v — xxx ad ʒi) were also useful.

For Sycosis, Stelwagon recommends shaving daily, or every second day, and depilation whenever suppuration is a prominent feature.

The following ointment is also especially useful:—

R. Sulphur precip., ʒi.
Balsam. Peruv., ʒss.
Ung. Diachyli ad ʒi. m

Ichthyol (ʒi ad ʒi) is sometimes a valuable addition.

OIL OF WINTERGREEN IN ALOPECIA. (*Bulletin Gen. de Thérap.*, May 8, 1898.)

DR. HALLOPEAU, of Paris, reported to the Société de Thérapeutique the case of a young man whom he had treated with great success with this remedy, combined with three parts of ether. For experimental purposes it was only applied to one side of the head, the essence of canella—a substance in good repute for the treatment of area—being used for the other side. After five months of treatment the difference between the two sides was very marked, that treated with oil of wintergreen (*Oleum Gualtheriæ*) being almost healthy, while the other showed only downy hairs. The remedy has an agreeable odour, and provokes neither pain nor redness of the skin, in favourable contrast to most parasitocides, which are powerful irritants.

OINTMENT FOR PIGMENTATION OF PREGNANCY. (*Union Médicale*, November, 1892.)

R. Zinci Oxid. pur. . . . gr. iv.
Hydrarg. Oxid. Flav. . . gr. xvi.
Ol. Ricini
Theobromatis Olei . . . ʒ iij.ss.
Otto Ros. gutt. x.

Sig.: The ointment for use twice daily—some to be allowed to remain on at night.



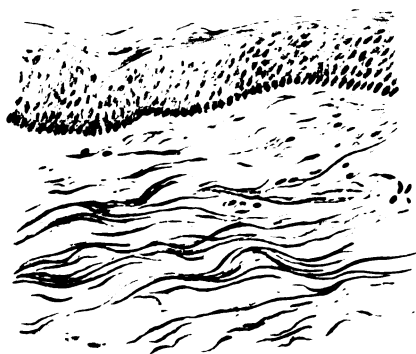


Fig. 3

Fig. 4

Xanthoma leucostoma.

PLATE I. 187. 188.

THE BRITISH JOURNAL OF DERMATOLOGY.

NOVEMBER, 1893.

A CASE OF XANTHOMA DIABETICORUM.

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THIS rare and curious affection is far from being satisfactorily explained. It is certainly not absolutely identical with ordinary xanthelasma, and even its connection with diabetes or glycosuria is, as the following caseshows, not quite constant. It seems, therefore, worth while to place any additional cases on record. Before speaking of my own case, I will just allude to that which Dr. Marett Tims describes in this number of the Journal, and which he was good enough to let me see. When Dr. Tims's patient first came under my notice at Blackfriars, his appearance was so suggestive of this disease as to lead me at once to examine the urine, which was found to contain sugar. When the patient now spoken of came under my care shortly afterwards, I was at once struck, not only with the identity of the eruption, but with the remarkable physical resemblance between the two men. They were not very different in age, both robust and well-nourished, and so remarkably alike in face that they would have been taken for brothers; and, in fact, a physician at the Blackfriars Hospital did mistake one man for the other, whom he had previously seen. It was, therefore, with the utmost confidence that I examined the urine in the second case for sugar, and it was with great surprise that I found it absent. I mention this to show the curious fact that there might be two cases of this skin affection, the patients being

strikingly alike in physical constitution, and yet one might have glycosuria and the other not.

The case now recorded was that of a man, E. H., 33, a clerk, strongly made, of middle height, inclined to be stout and florid, but on the whole of very healthy appearance. His family history showed nothing notable. He himself had had no serious illness and always enjoyed good health, except that ten years before he had injured his spine by a fall, and had been kept in hospital for nearly a year. He completely recovered, and since then nothing had ailed him. His habits were said to be temperate, but he drank pretty freely of beer. The heart and lungs were found normal on examination, as also the abdominal organs. The patient stated that he had never suffered from gout or rheumatism; but the joints of the index and middle fingers of the right hand, though not enlarged, were stiff, so that they could not be completely flexed. The skin over them was thin and smooth, but not red. On the whole, the condition resembled those insidious cases of gout in the joints where there is no active inflammation, but it was not perfectly distinctive. There was no complaint of indigestion, constipation or jaundice. The urine was of normal specific gravity, containing no albumen or sugar, but a small deposit of urates. It was said not to be increased in amount.

The skin eruption for which he sought advice had the following characters:—It was composed of papules or flat elevated tubercles, varying in size from that of a pin's head to a quarter of an inch in diameter, decidedly hard on pressure. The larger patches were punctate and apparently formed by confluence of smaller papules. The colour of some was bright yellow, approaching that of bile. Others were more of a fawn-colour. They were opaque, with injected blood-vessels. On pressure the vascular injection disappeared and yellow masses, evidently deep in the skin, became more distinct. Other papules were of a dull pinkish-colour, and appeared to represent a later stage. There were also some brownish-pink maculæ, corresponding to papules which had faded. There was no fluid exudation, suppuration or desquamation. A little itching was complained of.

Distribution.—The eruption occurred on the elbows and adjacent parts, above and below, on both flexor and extensor aspects, but not so far down as the wrists. On the flexor side of the left forearm was

a singular row of half a dozen papules, evidently resulting from a scratch, as we sometimes see in the case of Lichen planus. Papules also occurred on the lumbar region and flanks, especially of the right side, a few on the lower part of the abdomen, and on the anterior aspect of the right thigh; also on the buttocks and backs of both thighs, but not so far down as the knees. There were a few papules over the scapulæ, but not higher, and none on the chest, face or head. The arrangement was generally scattered, not linear, and the whole distribution had, as will be seen, nothing typical, and was only, speaking generally, confined to the trunk and the more central parts of the limbs. There were, perhaps, about a hundred papules in all.

Duration.—The affection had existed for about a year; but had come out in three eruptions, each lasting some weeks or months and then fading. The present had lasted for five weeks and appeared to be declining. The maculæ left by the two previous eruptions were still visible.

Diagnosis.—There can be no doubt that, although no sugar was present in the urine of this patient, the case was one of that variety of xanthoma called diabeticorum. I base this conclusion on the identity of the eruption with that in Dr. Tims's glycosuric case, and also on its agreement with the published accounts of most of the other cases recorded. These have been collected and enumerated by Mr. Malcolm Morris in his paper published in this Journal, August 1892, so that I need not refer to them except to point out the characters common to all. From this list, I think, should be excluded Dr. Barlow's case of a lichenoid eruption, not yellow, occurring in a diabetic patient, because there is no evidence that it was really the same affection. If we once give up the yellow colour as the criterion of xanthoma, we have no fixed landmark on the subject. The other cases exhibit the following characters:—(1) A distribution somewhat different from that of ordinary xanthoma, avoiding the eyelids and showing a preference for the joints; but this is of little consequence. (2) The lesions are made up of confluent papules, not of uniform flat patches or striæ. (3) The patches are more or less hard, not so soft as ordinary xanthoma. (4) The skin-lesions come out somewhat rapidly, in distinct eruptions, which undergo spontaneous involution in the course of some weeks or months. (5) There is usually some itching, slight pain or tenderness. (6) There is no

jaundice or other sign of disturbance of the liver. (7) The habit or constitution of the patient is usually robust and well-nourished ; or even plethoric and obese (as is more precisely shown below). (8) In nearly every case there has been glycosuria, often transitory.

In all these characters, except the last, my case agrees with the series of cases referred to ; and this combination of characters forms so definite a type, that I cannot think the absence of glycosuria puts this case in a different category from the rest. In most cases which have been observed for a length of time, the glycosuria and the eruption have been—either one or both—transitory, and in some (as in Dr. Marett Tims's case, which follows) both have disappeared together. Now, in my case, the eruption was fading at the time of examination ; it is therefore quite possible that the patient had had an attack of glycosuria, which had already disappeared. The remarkable physical resemblance of these two patients adds to the probability. In Dr. Cavafy's case (this Journal, Vol. I, p. 76), it is pretty certain that glycosuria *had* existed previously.

Treatment.—I gave the patient sodium salicylate and potassium citrate. The eruption began to fade at once, whether in consequence of the treatment, or not, I cannot say. He was not dieted, except by limiting his consumption of beer. My reason for giving these drugs (and for recommending the same treatment in Dr. Tims's case) was that the cases appeared to me to belong probably to that group of (rheumatic or gouty) diabetes distinguished by Dr. Latham in his Croonian Lectures on "The Pathology of Gout, Rheumatism and Diabetes," as benefited by salicylic acid (*Brit. Med. Journal*, 1886, I, 737). Whether in these cases the drugs actually had a curative effect may be doubtful, as there appeared to be a spontaneous fading of the eruption. It must also remain uncertain whether the presence of sugar in the blood was actually the cause of the eruption, as the skin-lesion and the glycosuria might rather be both concurrent effects of some visceral disturbance.

HISTOLOGICAL EXAMINATION.

This examination was made on the glycosuric case described by Dr. Tims, as the patient in my non-glycosuric case objected to a portion of his skin being removed ; but I repeat that the external appearance of the skin-lesion was identical in the two cases.

With the patient's consent, a papule was cut out from his arm with curved scissors, and placed at once in strong alcohol. Decomposition was thus prevented, but the fat was in great part removed. On cutting it out it was plain that the yellow mass lay under the epidermis, and occupied the whole thickness of the section. I stained the sections with various dyes,—eosin alone, eosin with hæmatoxylin, methylene blue, and methyl violet; and mounted them in balsam and glycerine jelly.

The epidermis was normal, or only slightly swollen; and the papillary layer showed only moderate vascular congestion. In the corium the changes appeared to be both inflammatory and degenerative. The fixed connective tissue-cells were enlarged, and showed in some places signs of proliferation, the fibrous bundles were swollen, being sometimes of considerable thickness, and of homogeneous translucent appearance. There were also a moderate number of lymphoid corpuscles, but the amount of cellular infiltration was not great. Between the meshes of the nucleated fibrous tissue were seen granular masses, apparently the remains of cells which had undergone granular or fatty degeneration. Where these appearances were seen the fibrous tissue appeared rarefied, showing large intervals, as is seen in figures 1 and 2. In the central part of the large section is seen a hair-follicle, around which the nuclei are more numerous. The duct of a sweat-gland at one extremity of the section (fig. 1) shows similar changes. These appearances do not seem to prove that the morbid change originated in either of these structures, since when there is diffuse inflammation of the corium it will always be most marked round these parts, where the connective tissue is denser than elsewhere.

The above description applies especially to the central portion of the papule; on the marginal portions another change was seen, affecting the *elastic tissue*. The elastic fibres (which were not traceable at all in the central portion) were very numerous, and set closely together, with little intervening tissue, so that the elastic tissue appeared to be, at all events, much increased in amount. In one part they ran along horizontally, in the normal position below the papillary layer, but separated only by degenerated fibrous tissue with few or no cellular elements (fig. 3). In other parts they formed tangled masses of relatively considerable size, curled and convoluted in a

characteristic manner. The elastic fibres were of very variable size, some being certainly thicker than normal (fig. 4), and were imbedded only in some homogeneous (degenerated) fibrous tissue without any cellular elements.*

This alteration of the elastic tissue appears to be the same as described by M. Balzer from a case of xanthoma which is not said to have been diabetic (*Archives de Physiologie*, 1884, Série III., Tome IV., p. 65). He describes masses composed almost exclusively of elastic tissue, the fibres being hypertrophied, and in some cases broken up into fragments, which at first sight were mistaken for bacteria. Another case with similar histological appearances was observed by M. Chauffard; and a histological examination of the skin made by M. Darier [Kaposi, "Maladies de la Peau," traduction par MM. Besnier and Doyon, 2nd ed., II., p. 335]. In the latter case there was no glycosuria, but in its aspect and evolution had much resemblance to a case of Diabetic Xanthoma (*id.*, p. 336). M. Balzer recognized its resemblance to his case, already referred to; and stated that the microscopical lesions had almost the same appearance and situation. We may then, I think, conclude that the changes of the elastic tissue here described are the same as in those two cases to which MM. Besnier and Doyon give the name of "Xanthome élastique."†

With respect to the nature of the change, we cannot, I think, consider it as a hyperplasia of elastic tissue (a process which would indeed be without a parallel in pathology, so far as I know), but rather as a *relative preponderance* of elastic tissue in consequence of degeneration and absorption of the other constituents of the corium. This tissue appears to have special powers of resistance to the morbid change which causes the disappearance of the other elements.

Summary of Histological Changes.—The morbid changes of the skin in the above case may be thus summed up:—(1) Moderate inflammation of the corium, somewhat more marked around the hair-follicles

* These appearances were best seen in sections stained with methyl violet, which colours the elastic tissue very forcibly, and is retained by them when the tissue generally is almost decolorized with alcohol. The same method did not reveal elastic fibres in the central portion of the papule.

† I have not been able to find any figures of the histological changes in the cases examined by MM. Balzer and Darier. In M. Balzer's paper figures are promised, but do not seem to have ever appeared.

and ducts of sweat-glands; consisting of changes chiefly in the fixed cells, with the usual swelling up and softening of the elementary fibres, but with few lymphoid corpuscles. (2) Remains of large cells, presenting granular and probably fatty degeneration. (3) Relative preponderance, in certain parts, of altered elastic tissue.

Of these three morbid changes, the first has been generally described as occurring in xanthoma diabeticorum; the second is the characteristic one of ordinary xanthoma, and recognized to a certain extent in the diabetic form; the third has been supposed to indicate a third type of the disease, distinct from the other two.

This association of morbid changes seems to suggest that there is at least a common element in these three several forms of the disease, and that the difference between them may not be essential, but may depend upon accessory circumstances, or on their corresponding to different periods in the evolution of the pathological process. This is, as regards the two ordinary forms of xanthoma, the conclusion at which Malcolm Morris, Crocker, Besnier and Doyon have already arrived; but the "elastic xanthoma," of Balzer and Darier has been regarded as something entirely different.

As regards the inflammatory changes which have been universally recognized in diabetic xanthoma, it seems evident that these are connected with the transitory, or recurrent character of the eruption which has been observed in the majority of cases. This inflammatory element is not absolutely wanting in the recorded cases of ordinary xanthoma, but the passive and persistent character of the eruption makes it improbable that inflammatory changes would be generally marked or predominant.

As regards the predominance of the large xanthoma cells, or "giant cells" as Dr. Crocker calls them, in the chronic or persistent form of ordinary xanthoma, I would suggest that their persistence and remarkable hypertrophy may be dependent on mechanical causes. When a cell of this size, lying in the interfascicular spaces of connective tissue reaches a certain size, it becomes too large to be removed by the lymphatics, and supposing it to be continually fed with the same materials which gave rise to its growth, would undergo still greater hypertrophy. The same explanation was suggested by Rindfleisch for the large "scrofulous" or tubercular cells ("Pathologische Gewebelehre," 5th edition, p. 86 and elsewhere), and has been

confirmed by Green ("Pathology of Consumption, and Introduction to Pathology"). The only thing likely to cause the destruction or absorption of such cells would be an acute vascular inflammation, such as is not seen in these cases, but is observed in the diabetic form. It suggests that the production of acute local inflammation might cause the disappearance of chronic xanthoma patches; an experiment which I have not had the opportunity of trying, but should try when circumstances permitted.

As regards the alterations of elastic tissue, it appears to me that they must represent a particular period in the evolution of the xanthoma patch, and would not be seen either earlier or later. Not earlier, because, while the rest of the corium was intact, this predominance of elastic tissue would not be seen. Not later, because, in the end, the elastic tissue must undergo degeneration and absorption like the other structures of the corium. This is probably the reason why they are only occasionally observed.

Pathology of Xanthoma Diabeticorum.—As this subject has been so fully discussed by Mr. Malcolm Morris and Dr. Crocker in the last volume of this Journal (August 1892), I will only make a few remarks on the general condition of the patients, glycosuric or not, in whom this eruption has been observed. Referring to Mr. Malcolm Morris's exhaustive examination of the thirteen cases on record, Dr. Crocker's single case (Case 14), and the two here spoken of, the following remarkable facts appear:—

Out of the sixteen cases one, Dr. Barlow's case, ought, I think, provisionally to be left out of consideration, since, for reasons given above, we cannot be sure that it really belonged to this disease.

Of the remaining fifteen cases, there are no less than seven in which the patient is described as remarkably stout, or florid, or obese, (Cases 4, 9, 11, 12, 13, and our two, which I call 15 and 16). In two other cases (2 and 14) the patient was well-nourished, though not remarkably stout. In two others, the occupation of the patient was that of a man-cook, which implies abundance of food and the reverse of active habits. In another (5) the condition clearly depended upon over-eating and drinking; and this is hinted at in Case 6. Therefore, out of fifteen cases, there are twelve in which the nutrition, or adipose accumulation, was decidedly in excess, and one of doubtful significance. Of the two cases which remain, in one (Case 3) nothing is

said of the nutrition; and there remains only the original case of Addison, which is said to have presented all the ordinary characters of diabetes. Another case (No. 17), reported by M. Hallopeau (*Annales de Dermatologie*, 1893, Vol. IV., p. 935) was also that of a vigorous man with marked tendency to obesity.

It is further notable that only two of the cases were in women; the remainder occurring in men at or approaching middle life, so far as recorded, except Case 1 (Addison's), in which the patient was 26.

Further, it is to be observed that in most of them, so far as traced, the glycosuria was transitory, or disappeared under treatment by diet or remedies, and that in the majority of cases the eruption was also transitory.

Now, I ask, would any one, reading the history of these cases, apart from the skin affection, think them fairly described as a series of cases of diabetes? I think not. They would rather appear to belong to that clinical type which has been distinguished as glycosuria of well-nourished persons in middle life, which may be chronic, but is often transitory, or at most, recurrent. I therefore entirely agree with Dr. Marett Tims in deprecating the use of the word diabetic in these cases. It would be out of place here to discuss the subject of glycosuria, but I would refer to the discussion at the recent meeting of the British Medical Association, introduced by Sir Dyce Duckworth, on "Chronic Glycosuria in Middle and Advanced Life," and may be permitted to say that I agree with Sir Dyce Duckworth as to the need for distinguishing such cases from what we may call true diabetes. (*British Medical Journal*, Oct. 7, 1893.)

Pathology of "Xanthome élastique."—Of the two cases previously recorded in which changes were noted in the elastic tissue, one (Balzer's) was that of a man dying of tubercular phthisis. Whether the urine did or did not contain sugar is not mentioned. In the second (Chauffard's) the patient was of robust constitution, and in tolerable health, though anæmic and with suspicious signs at the apex of one lung. He had suffered from malarial fever, and from hæmatemesis, attributed to gastric ulcer. His urine was normal. These facts are not sufficient to indicate any generalization as to the pathological state of those affected with this form of xanthoma; if it be a separate form. In external characters it seems to resemble the "diabetic" form. It may be worth while to point out that elastic

tissue is a decidedly yellow substance ; which may have something to do with the colour of the patches.

In conclusion, I would urge the retention of the name Xanthoma for this affection ; for, although it is not precisely like persistent xanthoma connected with jaundice, it has still less resemblance to lichen. Further, since diabetes seems too grave a word for the accompanying urinary condition, *Xanthoma glycosuricum* would be perhaps the most suitable term.

XANTHOMA DIABETICORUM.

DESCRIPTION OF PLATE ON FRONTISPIECE.

(*Dr. Marett Tims's Case.*)

1. Section through Xanthoma papule stained with methylene blue. Drawn with a power of 70 diameters.
2. Small portion of the same section, more highly magnified (550 diameters). The remains of cells seen in the meshes of tissue are granular, and were probably fatty ; but there could not have been large drops of fat, since such would be still visible as vacuoles, after the fat was removed.
3. Marginal portion of papule, showing elastic tissue in horizontal bands. About 900 diameters.
4. Irregular collection of elastic fibres (550 diameters). This hardly gives an adequate notion of the richness of elastic tissue in some parts.

CASE OF XANTHOMA DIABETICORUM.

BY H. W. MARETT TIMS, M.D. EDIN.,

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As the number of reported cases of this affection is still very limited, a few notes of an additional case may be of some interest. W. H., aged 44, unmarried, whose occupation was that of a commercial traveller, was first seen in April 1898.

He has always enjoyed exceptionally good health, his only illnesses being enteric fever at the age of 17 years, and syphilis three years ago, for which he underwent systematic treatment, and from which he has never felt any further ill-effects. He has never had jaundice, nor has he ever suffered from headaches, or any symptoms of hepatic disturbance. Occasionally he has slight rheumatic pains. His occupation has led him to take large quantities of malt liquors, but he has never been much of a spirit drinker.

Family History is distinctly good. His father died of erysipelas following an injury. His mother, aged 72, is still alive and well. He has four brothers and four sisters; one sister has had rheumatic fever with subsequent cardiac mischief, but the others are all healthy and strong. The patient states that their regular medical attendant says that all the family suffer from "touches of the liver," but there does not appear to be any actual disease.

Condition when first seen.—Health very good. Is stout and well-conditioned, but sweats profusely. Weight 13 stone 7 lbs. Has only sought advice thinking the skin affection might be some return of the syphilis. Bowels, as a rule, freely open. He has a hearty appetite, but does not eat ravenously. He drinks a good deal, not from thirst, but from the temptations of his occupation. His urine varies in quantity with what he drinks. It is difficult to get a true estimate of the quantity, as his occupation prevents its collection, but on several occasions the amount passed between 4 P.M. and 9 A.M. has been

measured and found to vary from 20 to 30 ounces. He never has to get up at night to pass water. Occasionally he has thought the urine to be small in quantity and very dark in colour. Sp. gr. 1032; sugar about 8 grs. to 3i. No bile pigments. No albumen or casts.

Liver dulness slightly diminished. Other organs healthy.

Eruption consists of hard reddish-yellow nodules, oval, raised, about $\frac{1}{2}$ inch long and half that in breadth, and distinctly connected with the hair-follicles. They commence as hard papules about the size of a pin's head. On the left thigh, posteriorly, is a nodule about $\frac{1}{2}$ inch in diameter, inflamed and looking as if about to suppurate; this had been present about two years; the others, of which there were twelve, had only been present for ten weeks.

There were no shooting pains previous to their appearance, neither were the nodules themselves tender or irritable.

Distribution, Right Arm.—Five on the anterior aspect of the forearm and in the bend of the elbow, and one over the external condyle of the humerus. *Left Arm.*—Three, all on the anterior aspect. *Right Leg.*—One in the bend of the knee. *Left Leg.*—Two on the thigh, one posteriorly and the other on the inner aspect. About a fortnight afterwards a small cluster appeared on the nape of the neck.

Treatment.—On the suggestion of Dr. Payne, who kindly examined the case, he was given 10 grs. of salicylate of soda three times a day, and put upon a modified diabetic diet.

A month later the spots were disappearing, and no fresh ones were to be seen. Urine, sp. gr. 1018; sugar, a mere trace.

Present Condition.—Health, very good. Weight, 12 stone 10lbs.: that is, a loss of 11lbs. in five months, which the patient attributes to having left off all malt liquors. Urine, sp. gr. 1013. No sugar perceptible. Eruption almost entirely disappeared.

In this case the localisation is noticeable; the most common positions, viz., the extensor surfaces, being quite free; moreover, some of the nodules were situated in the flexures, as in a case recorded by Besnier. The entire absence of subjective symptoms is also unusual.

The question arises, Are we justified in calling cases, such as this, by a name implying that those who have this eruption are suffering from diabetes mellitus? This patient, beyond the glycosuria, presents no other symptoms of that disease, and the disappearance of the sugar

upon a modified diabetic diet (not rigidly adhered to, as the patient confesses) with salicylate of soda, (a drug which is said to *cause* glycosuria in patients taking it for rheumatism,*) are facts hardly in consonance with our ideas of the gravity of that disease. Again, glycosuria is not always present in these cases, and in Hillairet's case, the eruption almost disappeared whenever she gave up "late supper and full-bodied wines" (*vide* Malcolm Morris's paper, *British Journal of Dermatology*, August 1892), which points to some periodic cause rather than a continuous one, such as diabetes would be.

A fact, which I think is not without significance, is that in more than one instance the patients have taken beer freely: now maltose, the sugar formed in the process of making ale, is readily converted into dextrose, which is another name for glucose, from which diabetic sugar is chemically indistinguishable. May not excessive beer-drinking give rise to glycosuria in some people, which disappears when the habit is given up, such temporary glycosuria not indicating true diabetes? The beer in quantity would interfere with the healthy action of the liver, which, in some way, might lead to the eruption taking on a xanthomatous nature; and it is well known that it leads to the production of fat, such being a noticeable fact in the majority of these patients, the few exceptions, as in Dr. Barlow's patient, being cases of true diabetes mellitus.

Rheumatism is mentioned as being present in some of the cases, but its absence is not noted in the others; this is exactly what one might expect if these suggestions be true, and it is found that the eruption is cured quite as quickly by a diabetic, or a modified diabetic diet, which of course excludes malt liquors, and such drugs as salicylate of soda and citrate of potash (Colcott Fox), or even by the giving up of "late suppers and full-bodied wines," as when a rigid diabetic treatment is enforced.

In conclusion, I should point to the liver being at fault, as in other forms of xanthoma; to its possible association with rheumatism; and to the glycosuria being temporary, and not as positively indicating diabetes mellitus; hence I would suggest the adoption of a new name for this affection, as the present one is too rigorous in its inference, and too alarming to the patient.

* "Principles and Practice of Medicine." Fagge and Pye-Smith. 8rd ed., Vol. II., p. 566.

ERYTHÈME INDURÉ DES SCROFULEUX (BAZIN),

BY R. GLASGOW PATTESON, M.B. UNIV. DUBL., F.R.C.S.I.,

Surgeon to St. Vincent's Hospital, Dublin.

A PAPER by Mr. Jonathan Hutchinson in his *Archives of Surgery* for July, 1893, and a still fuller paper by Dr. Colcott Fox in the *British Journal of Dermatology* for August and October of the present year—called to my recollection an almost forgotten case of which fortunately I had a few scattered notes preserved. The sentence that fixed my attention in Mr. Hutchinson's essay was the following:—“These cases are of great importance, not alone on account of the difficulties in their treatment, but because, from their close resemblance to syphilis, they may easily give rise to unfounded suspicions and induce the adoption of uncalled-for medication.” And he adds, “I may freely confess that in former years I have myself been led into error, and at the present time, with the exception of those who have paid especial attention to the subject, I believe that the diagnosis of syphilis is the one almost invariably made and acted upon.” One need not therefore blush to err in such distinguished company; and as Bazin's description of this affection was quite unknown to me until after reading the papers above referred to, I was completely at a loss where to classify in the category of skin diseases the case which I have briefly related below, in the hope that it may prove of interest, and serve as an aid in diagnosis to those who may happen to come across similar cases in the future.

Mary R—, aged 18, first came to the out-patient department at St. Vincent's Hospital, in November, 1889. She was an unhealthy-looking girl with a dark, sallow complexion, and thickened *alæ nasi* and lips. She was suffering from multiple small punched-out ulcers of a peculiarly sluggish and unhealthy type situated on the anterior aspects of both legs. The surrounding skin was of a dark livid colour, extremely indurated and but slightly movable over the underlying

tissues. There were numerous small outlying nodules which were not elevated but could be felt underneath the skin, and were marked by a superficial brownish pigmentation. Some of these had broken down and were discharging through a tiny pin-hole opening a small quantity of sero-pus. These spots and ulcers were absolutely painless, appeared to spread by direct infection of tissue, and showed no tendency whatever towards healing. They were partially symmetrical, and no other part of the body was affected. There was no enlargement of the inguinal or any other glands. No history of syphilis, either hereditary or acquired, could be obtained; but so certain was I from the characters of the ulcers—which resembled broken-down superficial gummata—that some such taint was present, that the patient was put on a course of specific constitutional treatment, while a mild mercurial ointment was used locally. This treatment was pursued for some months, alternating with simple tonic treatment, but without any marked effect on the progress of the disease. During this period she had two or three attacks of inflammation of the anterior nares with induration and thickening, and the formation of crusts, much resembling the early stage of lupus. There was also some irregularity of menstruation about this time. For some months I lost sight of my patient and she had almost drifted out of my recollection as a case of anomalous syphilis, when in October, 1890, she was brought to me again by her mother on account of a swelling in her neck. On examining her neck I found a chain of enlarged, indurated glands extending from ear to ear, the largest about the size of a walnut, and presenting all the characteristics generally associated with tubercular adenitis. On enquiring about the ulcers on the legs I found that they had to a great extent healed, leaving dusky brownish-coloured patches which had remained permanent, but that recently, since the enlargement of the neck had been noticed, many of them had broken down again, and that there were once more numerous ulcers on both legs. These on examination showed the same features as previously—the congestion and induration being well marked, but the circular, or oval, punched-out character was not so prominent, and the margins were more irregular and undermined. I now shifted my ground and put the case under the group of tubercular lesions of the skin, not a true lupus, but a variety of scrofuloderma. The treatment adopted was locally a stimulating ointment, internally cod-liver

oil and the hypophosphites of sodium and calcium combined with tonics. Very marked improvement took place in the course of the next few months. Her general health improved; menstruation became regular; the ulcers on both legs almost completely healed, and those remaining had taken on a healthy action; and the glands in the neck had undergone a most noteworthy diminution in size and were much softer—evidently undergoing a gradual process of resolution. I saw her once two or three months afterwards, the legs were then quite well, only some superficial scarring and pigmentation remaining, but there was still considerable enlargement of the cervical glands. Since then the patient has been lost sight of.

Among French writers, as Mr. Hutchinson points out, the occurrence of ulceration is overlooked entirely, or regarded as a quite unessential part of the process. Thus Brocq in his recent work on the "Treatment of Diseases of the Skin" (Paris, 1892), under the heading *Erythème noueux*, thus refers to the variety he calls *Erythème induré des jeunes filles*:—"On doit, ce me semble, distinguer de cette affection (*E. nodosum*) une variété d'*érythème induré*, qui s'observe surtout chez les jeunes filles lymphatiques, qui est caractérisée par de larges plaques d'infiltration occupant les jambes, d'un rouge vif ou livide, et qui semble être en relation pure et simple avec la fatigue et le surmenage. Ces plaques indurées, qui deviennent parfois de véritables nodosités semblables à celles de l'*érythème noueux*, persistent d'ordinaire fort longtemps, et même pendant des mois." This clearly refers to the same disease, but no mention is made of softening or ulceration.

The reasons that lead me to believe that the above case is an example of the malady described by Bazin may be summarised as follows:—

1. The absence of a syphilitic history and the refractoriness of the ulceration to specific treatment.
2. The intercurrent development of other signs of scrofulous taint:—The indolent enlargement of the cervical glands, and the manifest tendency towards a lupoid ulceration of the nose.
3. The marked improvement under tonic and so-called anti-scrofulous medication.

CLINICAL NOTE.

A CASE OF PUSTULAR SCROFULIDE.

UNDER MR. MALCOLM MORRIS, IN ST. MARY'S HOSPITAL.

(NOTES BY MR. ARTHUR STANLEY, CLINICAL ASSISTANT.)

JOHN LARRIGAN, a boy of fourteen, was admitted into St. Mary's Hospital on June 6th, 1893, for an eruption on the skin. There was a strong tubercular family history—the mother having died of “consumption,” while a brother and two sisters had enlarged cervical glands.

The patient was manifestly “scrofulous.” There were glands in the neck actively suppurating, as well as several scars, the result of previous operations on, and breaking down of, cervical glands, and there was discharge of pus from both ears, with deafness. The aspect of the boy was not that which has been described as accompanying the so-called “tubercular diathesis,” for his complexion was ruddy, and he looked perfectly healthy. The lungs were normal.

He first had an eruption of “spots” on the skin when two months old. This eruption is said to have recurred every year of his life, coming out in spring and disappearing in autumn. This year the eruption began in May, on the arms.

The period of activity of the skin eruption is stated to have always been accompanied by a period of activity of the scrofulous glands of the neck. During the winter the cervical glands are quiescent: about April every year, simultaneously, the eruption occurs on the skin, the cervical glands become swollen, and there is profuse sweating.

The Characters of the Eruption.—The lesions were multiform: there were present:—1. Small, miliary, isolated papules of the same colour as the normal skin, and occurring only on the lower part of the abdomen. These lesions were like those characteristic of Hebra's Lichen scrofulosorum, but were not disposed in groups.* 2. Small

* *Vide* Tilbury Fox, *Clin. Soc. Transactions*, vol. xii.

raised pale-red papules ($\frac{1}{16}$ in. diam.) in the middle of each of which a hair was found. 3. Small, red, densely-crowded conical papules about the size of a pin's head, presenting in the centre a horny spine. These occurred only over the scapular and lumbar regions, where the skin felt like a nutmeg-grater, recalling the *Lichen spinulosus* of Devergie. 4. Larger, deeper-red, rounded papules ($\frac{1}{16}$ in. diam.), in the centre of which a hair was invariably found. 5. The papules of 4, capped with a small vesicle. 6. Pustules, resembling those of *acne vulgaris*, a later shape of 5, from which a sero-purulent fluid could be expressed. 7. Papules capped with a sero-purulent scab. 8. Papules, deep-red, with the scab rubbed off, and presenting an excavation caused by evulsion of a central yellow sebaceous-like plug. 9. Papules in an evanescent stage, becoming smaller and paler. 10. Pigmented spots, the remains of former papules, of a pale raw-sienna tint when blood was expressed. 11. Minute cicatricial pits (about $\frac{1}{30}$ in. diam.).

Distribution.—The lower part of the face: the arms and forearms, chiefly on the extensor surface, diminishing in intensity as the hand is approached: the supra- and infra-scapular regions: the flanks, chiefly posteriorly: the lower part of the abdomen slightly: the buttocks and outer part of the hips: the thighs, especially down the outer side, and also on the posterior aspect, with a few scattered lesions on the legs. In no place were the lesions grouped after the manner of Hebra's *Lichen scrofulosorum*: the lesions were scattered irregularly, and did not follow any definite arrangement. The locality most intensely affected was the outer aspect of the thighs and buttocks; here there was a larger proportion of pustular lesions than elsewhere.

Course.—The life history of the lesions was studied by surrounding each with a ring, and observing them from day to day. The small miliary isolated papules of the same colour as the surrounding skin (No. 1) gradually appeared, lasted for about seven days, and then slowly vanished. The small raised pale-red papules (No. 2) went through the phases successively described under Nos. 4, 6, 7, 8, 9, 10 and 11. The papules became capped with a vesicle, and in two or three days enlarged and pustulated. Some of the pustules resembled in size and hardness the variola pustule. After eight or ten days they discharged, sero-purulent scabs were formed, which fell off in two or three days, leaving a desquamating papule. In a week these papules

were represented by pigmented spots, and finally by a cicatricial pit. No itching attended the eruption.

Treatment.—Cod-liver oil internally and externally. The oil was rubbed all over the body twice daily. The patient appeared to make progress under treatment, a factor in which progress was the natural tendency which the eruption had to clear up as the autumn was approached.

Bacteriology.—The pus from a suppurating gland in the neck and from a pustule on the skin was examined for bacteria. Coverglass preparations were made from each source and stained by the Ziehl Neilssen method with magenta and methylene blue. No tubercle bacilli could be detected. No micro-organisms were found in the contents of the pustule from the skin, the microscopic field being occupied by leucocytes with the tri-partite nucleus stained deep blue. Numerous streptococci pyogenes were found in the pus from the suppurating gland in the neck.

CORRESPONDENCE.

ON PSORIASIS AND THE SEBORRHOEIC PROCESS.

PARIS, *September, 1898.*

MON CHER COLLEAGUE ET AMI,—On my return to Paris after rather a long voyage I find the September number of your excellent journal, and in it an article on “A Case of Seborrhœa Psoriasiformis,” by Dr. Stewart Stirling. I have read it with the liveliest interest, and with all the more pleasure as it confirms the ideas to which I gave vent some time ago, and upon which I am now writing a new memoir.

I should, however, not have troubled you on the subject, had I not found in the work some evidence that the author was unaware of my previous publications on the point, as he himself admits with the most perfect good faith. As these publications are not to be found in dermatological journals, but in didactic French works, and are consequently destined to be little known in other countries, allow me to quote some extracts to prove to your readers that the difficulties he has encountered have already been recognized and pointed out.

I am indeed at this moment, as I have already indicated, occupied in writing a detailed article on the dermatoses intermediate between seborrhœic eczemas and psoriasis, which will soon be published. The first of my didactic works in which I broached this question is the second edition of my *Traitement des Maladies de la Peau* (Paris, Octave Doin, Editeur, 8, Place de l'Odéon). I wrote as follows in 1892, page 156, *et seq.* :—

“Unna has constituted his Seborrhœic Eczema with the following diverse morbid types. . . . (5) A group of conditions (*faits*), still ill-defined, appear to be intermediate between psoriasis and the eczemas, which it is necessary to know well in practice, and the clinical physionomy of which we shall now attempt to portray :— (a) sometimes we have to do with a patient afflicted for some considerable time with a circumscribed affection of the axilla, inguino-crural fold, or more frequently of the skin round the anus, or in the intergluteal groove. The skin is of a red or yellowish-red tint, more or less infiltrated according to the duration of the affection and the amount of scratching which has occurred ; sometimes it is the seat of slight discharge, and is covered with fatty crusts ; more frequently it oozes very slightly, or is even dry, and only fatty scales are present, which are soft in those regions where two cutaneous surfaces are in contact, and dry at the periphery. The margin of these patches is pretty accurately defined. The amount of itching is extremely variable. These patients have seborrhœa in one or several regions of the body, scalp, nose, chest, &c. Almost always—especially if there be oozing—the diagnosis of eczema is made, then one is much surprised to find that the affection is rebellious to ordinary local remedies, and only yields to oil of cade, mercurial preparations, nitrate of silver, pyrogallie acid, &c. ; in one word, to topical applications which are known to be efficacious in psoriasis.”

“Moreover, in proportion as the affection heals under the influence of the preceding agents, it assumes more and more a psoriasiform aspect, so that one may even begin to doubt the diagnosis made, and to question whether or not one is really dealing with an atypical psoriasis.”

“(b) In another class of cases advice is sought by patients, also almost always seborrhœic, who exhibit on the scalp lesions characterized by redness of the skin—which may vary from a pale

yellow to a reddish-brown—by the most variable infiltration—generally very ill-defined,—and by adherent, branny desquamation—pearly, but not so much so as that of psoriasis—more fatty, and beneath which one cannot definitely discover any smooth, shiny surface, studded with hæmorrhagic spots. Is it psoriasis? Is it eczema? Is it a special parakeratosis?

“(c) In a third class of cases*—much more rare than the two previous—the patients who have long been affected with mild seborrhœa, or perhaps with seborrhœic alopecia of the scalp, are suddenly attacked by a disseminated eruption, of acute evolution, characterized by patches of a tint which varies from a pale to a vivid or brownish-red, covered with scales which become silvery (*micacées*) on rubbing, but which are, nevertheless, less pearly than those of psoriasis, and are, indeed, distinctly fatty in many regions, especially in the folds of the skin; these eruptive elements are pretty strictly limited, pseudo-papular at first, then spreading at the margins they may even become confluent, and thus form large red squamous or squamo-scabby surfaces. Sometimes, however, the lesions remain discrete and disseminate. They invade the integument in its totality, implicating even the palms of the hands and soles of the feet. The amount of itching is very variable. The affection may have, so to speak, a spontaneous evolution towards recovery, and in this case has the same course as a pseudo-exanthem; in a few weeks all traces are gone. But it may also spread, or at any rate persist, and only yield to energetic treatment. At first one makes the diagnosis of an acute outbreak of psoriasis; then, noting the seborrhœa of the patient, the red eczematiform aspect of the cutaneous folds, the thinness and character of the scabs, one questions oneself whether one is dealing with a special parakeratosis.”

All the facts described by Unna under the name of Eczema seborrhoicum seem “to permit of a very natural explanation by admitting that an individual constitutionally predisposed to eczema has seborrhœa at the same time. That seborrhœa, more severe in certain regions of the body than in others, creates *loci minoris resistentiæ*, or favourable seats for the eczema which there develops. When eczema is developed there it is modified: (1) by the particular condition of the skin which is seborrhœic; (2) by the cutaneous

* This is the type to which the case of Dr. Stewart Stirling must be referred.

secretions ; (3) by parasites of all sorts which abound upon this soil, so marvellously prepared for their evolution.”*

“It is evident that the preceding theory must be applied to psoriasis just as much as to eczema, and that there are cases of psoriasis developed in seborrhœic subjects which also attack on the skin the *loci minoris resistentiæ* created by seborrhœa ; their aspect will be modified by the seborrhœa, by parasites, by the maceration of the diseased surfaces ; they will assume a false air of eczema, and may be confounded with that dermatosis (see p. 691, article Psoriasis). The same reasoning applies to many other cutaneous affections, to the pityriasis rosea of Gibert, to syphilides, &c.”

“What precedes allows us to understand all the difficulties which there may sometimes be in distinguishing an eczema complicated with seborrhœa from a psoriasis also complicated with seborrhœa. At first sight it seems that the facts which we have ranged in our group 5 may be thus explained. We ourselves have long believed it ; but at the present moment we are much less affirmative. We think that there is a group of affections which develop especially in seborrhœic subjects, which are intermediate between eczema and psoriasis, the extreme terms of which cannot be clearly differentiated on the one hand from psoriasis, on the other from the eczemas which are *Parakeratoses*, and which it is impossible, according to our views, to classify either along with the eczemas or with typical psoriasis. They are really, it seems to us, special dermatoses, truly worthy of a special name. Let them be called parakeratoses or psoriasiform seborrhœic eczemas at will ; we are not discussing a mere word, but we wish to establish a fact.”

The second didactic work in which I again broached this question is my *Pathologie générale cutanée*, published in 1892 by G. Masson and Gauthier Villars of Paris. I there wrote (page 162 *et seq.*): —“If one examines and analyses with care the clinical facts which seem to appertain to one of the morbid types at present actually admitted, one will soon be convinced that they are not exactly comparable ; that some, while presenting an *ensemble* of characters which connect them with the type in question, offer on the other hand peculiarities which bring them somewhat close to other skin affections. If we take

* This was written before Unna's last publication on the parasite of Eczema Seborrhœicum.

psoriasis, as an example, we find that there are facts which may be considered as typical of psoriasis by their evolution, their constant recurrences, their localizations, their aspect, their dryness, their scales and their therapeutic reactions. But if we study all the dermatoses which may be attached to this pure type, we notice that there is quite a series of them which inflame with more or less ease, which are situated near the cutaneous folds, which sometimes ooze, which become covered with crusts with more or less facility according to different cases, so that, between typical psoriasis, seborrhœic psoriasis, and the eczemas called seborrhœic, there is a gradual scale of intermediate conditions establishing a sort of insensible transition."

"If we further pursue our researches on these psoriatic conditions, we find that there are other observations in which the scales are finer, branny, the skin but little infiltrated, the margins of the patches more ill-defined; they constitute a whole series of parakeratoses (dry catarrhs of the skin) which on the one hand touch on the lesions hitherto called dry eczemas, on the pityriasis rosea of Gibert, and on the other hand, when they become generalized, on certain forms of pityriasis rubra. There are others in which the psoriatic elements are very minute, punctiform, especially perifollicular, and which form a series of conditions which gradually end in an insensible gradation to pityriasis rubra pilaris. There are, moreover, others in which the eruptive patches become irritated, inflame, spread with rapidity, so as soon to cover the entire surface of the integument with an extensive red sheet which desquamates, and these cases constitute an entire list which terminates in the '*herpétides malignes exfoliatives*,' in generalized exfoliative dermatitis, &c. So that in a schema we place typical psoriasis in the centre; we see that in order to understand the group and render its complexity comprehensible, we ought to project from this centre series of lines which terminate at such and such another pure morbid type, and along each of these lines the morbid types intermediate between the two types of which they participate will naturally be placed at distances proportionate to the degree of resemblance which they present to each of them. These schemata allow us to account for the relationships which exist between the two distinct morbid types, relations which are established by the hybrid cases which constantly mislead observers because they do not under-

stand their real value, and do not succeed in according to them their suitable nosological position."

"What we have just said regarding true psoriasis is equally true for nearly all—nay, we may say, for all—known morbid types. The more we advance in the clinical study of skin affections, the more are we convinced of the truth of what precedes. We have found ourselves personally faced with almost inextricable difficulties caused by these hybrid types when we were studying closely the generalized red dermatites, pemphigus, and the neuroses of the skin. When minutely analyzing the clinical facts we have been able to convince ourselves of this great truth, that the conception of limits (*cadres*) fixed and accurately bounded is as artificial as possible, and in absolute non-conformity with the reality of the facts. Skin affections of internal origin (and probably the proposition must be further applied to skin affections of external origin) constitute an immense network, apparently inextricable, in which some centres appear somewhat more clearly defined than others, corresponding to pure types around which links radiate to terminate in other neighbouring centres."

"If all that precedes has been thoroughly grasped, one will understand why a classification which is merely a simple nomenclature manufactured after the ordinary manner, and composed of names of diseases succeeding one another, can in no sense be a satisfactory one. It cannot express the veritable physionomy of the morbid groups, their complexity, their intimate relationships, their entanglements. For this a schematic (*graphique*) method, such as we have brought forward, is necessary. It alone can allow of a fact being put in its proper place, of its being assigned to a pure morbid type, if such it be; if it is a hybrid type, of its being placed at a suitable distance between the pure morbid types of which it participates."

"We well know that the reproach of a want of exactitude will be addressed to this new conception of dermatological boundaries, of having outlines too ill-defined, and of leading to a lack of precision in diagnosis. To this we may reply that it is not our fault, but that of Nature, which in the case of diseases, as for creations of the animal and vegetable kingdoms, presents no gaps in its productions, and before all things we must seek the real truth, and not a relative, artificial truth, created solely for the greatest satisfaction of the mind and the simplification

of a task. But in reality we believe that this adaptation of morbid conceptions to clinical facts renders dermatological science all the more clear; after all, the main point is to definitely establish and thoroughly know those pure types which are the centres, the landmarks, the pivots of all conceptions. When these are well established the hybrid cases have only to be placed between them. These cases may have a special name, and then the diagnosis is precise; if they have not, it is sufficient to render their diagnosis precise to indicate their exact position in the network, and thus, it seems to us, is a diagnosis arrived at, much more exact and rigorous than if they are violently bundled into a morbid group to which they do not exactly belong."

These quotations, doubtless somewhat too long, show that not only we know facts analogous to those published by Dr. Stewart Stirling, but also a series of conditions intermediate between psoriasis and seborrhœic eczemas. They also prove that, not only we know them, but that we have busied ourselves with them, and that we have made use of them as one of our principal arguments in formulating some general ideas on our conception of skin affections.

We do not wish to dwell longer upon this point, and would refer for more details to the new work which we are soon about to publish.

Veillez agréer, mon cher confrère, avec toutes mes plus vives excuses pour vous infliger la lecture d'une aussi longue lettre, l'expression de mes sentiments les plus amicaux et les plus dévoués.

L. BROcq.

EDINBURGH, *October, 1893.*

DEAR DR. PRINGLE,—It is extremely gratifying to find that my short paper on "A Case of Seborrhœa Psoriasiformis," published in the September number of *THE BRITISH JOURNAL OF DERMATOLOGY*, has called forth so interesting and instructive a letter from Dr. Brocq, of Paris. I have read it with great interest and pleasure—more especially as the report of my case has confirmed his views on a somewhat difficult class of dermatoses.

I may explain, however, that when my paper was published I was entirely unacquainted with Dr. Brocq's publications on the same and

allied subjects. This explanation has already been courteously and accurately anticipated in his introductory statements.

I may, however, be permitted to point out that in one particular my case differed from Dr. Brocq's third group, in the palms and soles being *unaffected*.

I look forward with great pleasure to Dr. Brocq's forthcoming publication.

Meanwhile, kindly accept my best thanks for your letter and the accompanying manuscript.

Always faithfully yours,

STEWART STIRLING.

CURRENT LITERATURE.

INFLAMMATION AND CHEMIOTAXIS. DR. P. G. UNNA. (*Read before the Medical Section of the Heidelberg Society for Medical and Natural Science, January 29, 1898.*)

Up to the present time all the different theories of inflammation have failed to explain the very varied forms of inflammatory affections of the skin, the number of which (owing to their facility of observation as compared with the internal organs) has so far defied classification. In search for a more general and comprehensive principle than either the cell theory of Virchow, or the injured vessel wall theory of Cohnheim, Unna met with and investigated the theory of Pfeffer and Leben as to the chemotactic action of certain substances on bacteria and leucocytes, which seemed to explain satisfactorily by the chemical attraction of living matter, a number of facts which stood in direct contradiction to the previously taught doctrines.

As striking instances of this mode of action four illustrations were taken.

1. A case of Bockhart's impetigo (the impetigo of Erasmus Wilson), pure and simple epidermal abscesses developed by the yellow and white staphylococci. The cocci, in these lesions, are in the non-vascular epidermis, but without their proliferation, doing no perceptible injury to the cells, which present no pathological changes. All the morbid products (pus cells) which collect around them must be drawn from the highly vascular papillary body. There is no perceptible injury to the vessels, and the emigration to and around the vessels ceases, immediately the abscess has formed. The conclusion is obvious that with the attraction of the leucocytes from the papillary vessels, of which the penetrating organisms must be the cause, the entire morbid, the whole "inflammatory" process is ended. All previously advanced theories are insufficient and unnecessary for the explanation of this condition, because each histological basis on which they depend (cell proliferation, injury of vessels, of epithelium, of connective tissue) is absent. The whole of this high-grade inflammation begins and ends with a simple chemotactic attraction. The leucocytes are not forced through injured vessels towards the invaders, but drawn energetically through uninjured vessels to one point.

That this is not simply a new way of looking at an old phenomenon is shown by examining some of the vesicular inflammations of the skin.

2. That form of eczema (usually confounded with staphylogenous impetigo), in which an acute vesicular efflorescence develops the organisms of eczema (Unna's "morococci") under the horny layer. Whether spontaneous or inoculated lesions are examined, the micro-organisms (morococci) in the horny layer are found to have attracted pus cells; but whereas in the impetigo the pus is pure, in this affection it is mixed with much serum, which forms by coagulation the usual eczematous crust when the vesicle has dried.

According to the C. strain the type of the process primary of the vesicles is inflammation, the attraction of leucocytes with the attraction of serum which is a process of chemotaxis. The first of these two instances however, as we have leucocytes which can be drawn out from the vessels, and if the theory of chemotaxis which is true for them, it would apply equally to the second case, even though the serum is merely an accessory circumstance.

This point is better illustrated by the following examples:—

3. The case of a boy presenting an eruption of vesicles on the face and generally closely resembling the vesicles of varicella. The vesicle was constructed on the type of an impetigo vesicle. At the apex beneath the dry later, a colony of a distinct *cocci* had penetrated through a sweat-duct. The epidermis and papillary body appeared entirely normal, and the exudate consisted of pure serum and a single leucocyte being visible even on the base of the vesicle. As normally a few leucocytes always leave the vessels with the serum it is evident that they have in this case been prevented from emigration or even actually repelled. The case shows clearly that the mixing of leucocytes and serum is not produced except by a certain grade of inflammation, for this was as purely a serous vesicle as the impetigo was a pustule. We are thus forced to the belief that each inflammation attracts a definite formed or unformed constituent of the blood and repels others, and in this manner creates a particular kind of exudate.

Case 4. The case of a child *at.* 10, in which there had appeared for long periods on the buttocks vesicles from the size of a pea to that of a lentil, later only crops of small yellow pustules with reddened bases. Their appearance was that of a peculiar impetigo, but microscopic examination showed that not only the roof, walls and floor, but the whole contents of the vesicles were filled with stringy fibrin, which contained in its meshwork epithelial cells and leucocytes. In the centre were found, studded about amid the contents, staphylococci, differing in size and form from the ordinary pyogenous species. The fibrin, which is entirely absent from the common staphylococcus suppuration, was too great in quantity to be of accidental origin, and occurred at the very height of the formation of the vesicle; moreover, as all the elements were in good condition and stained well, it was unlikely that it originated from their degeneration. This, therefore, appeared to be a case in which, in addition to the leucocytes, fibrin was attracted by the chemotactic action of the micro-organisms in place of serum.

In all these four cases we have the same pathogenesis, a micro-organism penetrating into the non-vascular horny layer, multiplying in the tissue juices, producing toxins which each after its chemical nature influence the tissues in a larger or smaller semicircle, acting upon the movable elements, the constituents of the lymph and blood, and the wandering cells. In the first case this influence was purely leucotactic, in the second leuco-serotactic, in the third purely serotactic, in the fourth leuco-fibrinotactic, representing so many inflammations of the epidermis.

This principle of chemotaxis always involves the idea of the remote action of micro-organisms by means of toxins. For its production proliferation of the organisms, and sufficient moisture to allow the diffusion of the toxins, are necessary conditions, and if these are present it becomes readily conceivable how *bacteria which are limited to the epidermal layer can influence the cutis*. This being so, it is evident that we need not limit to the cutis the cause of affections in which the first signs appear in the cutis, but must consider the possibility of the remote action

of a cause located in the epidermis, a principle applicable not merely to the study of inflammations of the skin, but of wide applicability in general pathology. The action of mechanical stimuli to inflammation and of physical causes (heat, freezing, &c.) remain still to be investigated (possibly they are first converted into chemical causes), and diapedesis of red blood-corpuscles, hæmorrhagic dermatoses, and the migration of fats and pigments have also to be examined from this point of view. But the principle of chemotaxis, by showing that separate substances may be attracted through the uninjured blood-vessels by external attraction, just as all the constituents of the blood through healthy vessels by the negative pressure of the cupping-glass, does away at once with the necessity of Cohnheim's theory of the primary molecular injury of vessel walls in the theory of inflammation, and explains the previously paradoxical slowing of the blood current in the dilated vessels of inflammation areas, the blood of the whole of the affected region being fixed by the same cause of attraction.

Inflammatory hyperæmia, viewed in this light, is far removed from nervous or paralytic, and resemble more the engorgement-hyperæmia produced by elevation of atmospheric pressure and gravity. But the feature which distinguishes it from both these other forms is the presence of an exudate, the result of chemotactic action, whereas they are accompanied by a transudate, a transposition by purely physical causes of constituents of the fluid blood from the blood channel to the tissues.

Unna's provisional definition of inflammation in general would thus be—a tissue injury (progressive or retrogressive, exudative, proliferative, or merely nutritive) occasioned by the issue of an exudate from the blood-vessels as a result of the presence of a chemotactically active body in the tissue. H. G. B.

ADENO-CYSTOMA INTRACANALICULARE OCCURRING IN A NÆVUS UNIUS LATERIS (*Journal of Cutan. and Genito-Urin. Diseases*, May, 1898.)

UNDER this title Dr. George T. Elliot of New York describes the case of a man, aged 26, in good health, who had a dozen lesions arranged in a linear patch along the outer border of the trapezius muscle in the right suprascapular space. Some lesions were discrete, and from a small pea to a bean in size; the majority were closely aggregated; some were dense in consistence and bluish-red, others soft and pale red. Some had been irritated and were warty and crusted over. The duration of the lesions from childhood, and the clinical appearances, suggested the diagnosis of an irritated nævus unius lateris. Microscopically the corium was found to contain cystic cavities of various sizes, formed in connection with the sweat coils and ducts; the majority deep-seated, some even in the fatty layer, multiple and in aggregations, with others, usually single, stretching away towards the epidermis. Most of the smaller cavities were lined with a basement membrane, upon which were one or more layers of cubical epithelial cells surrounding a central lumen. In many degeneration of the inner cells had occurred. Similar appearances were found in the larger and in the aggregations of cavities, but here the cellular degeneration was more extensive. The seat of the pathological process was the sweat coils and their ducts, the cavities being portions of the coils dilated by the cellular proliferation which took place in them, and which subsequently underwent degeneration and death. Polypoid buds were observed growing into the dilated canals. There was also a warty overgrowth of the papillary portion and rete, and

more or less extensive round cell infiltration in the upper portion of the derma, with moist cells throughout its entirety. The author refers to Petersen's case of adenoma of the sweat glands (*Archiv. f. Derm. U. Syph.*, 1892), and contrasts the two cases with regard to the embryonal development. Dr. Elliot considers the cystic degeneration in his own case as secondary and due to the irritation of a *nævus unius lateris*. (*J. Cut. and Gen.-Urin. Dis.*, May, 1898.)

T. C. F.

THE ETIOLOGY OF CANCER.

PROFESSOR DUPLAY and M. Cazin discuss in the *Semaine Médicale*, some of the more recent assertions made in various quarters on the Etiology of Cancer. In connection with the possibility of a more or less direct transmissibility of cancer from one member of a household to another, or among the inhabitants of a locality, the evidence is very meagre. Arnaudet asserted the frequency of cancer in the Canton of Corneilles, where it exists in somewhat epidemic form and localized to certain districts. Arnaudet suggested that the disease was conveyed through drinking water, and especially cider made with contaminated water, or by defective sanitation of dwellings. Professor Brono's subsequent investigations, however, failed to afford any corroboration. Fiessinger traced four cases of cancer in three houses to contamination, apparently with the dressings from a case of scirrhus of the breast. Guelliot and Fabre collected instances of "house-epidemics." In this connection Metchnikoff's hypothesis must be borne in mind that cancerous neoplasms might possibly belong to the group of miasmatic diseases capable of being propagated by spores formed outside the organism.

It has long been known that cancer is easily disseminated throughout the organism by cancerous particles detached from the primary growth and deposited in the various organs and tissues. Secondly, experiments on the human subject have shown that the inoculation of cancer to patients already suffering from the disease is not necessarily followed by positive results, though some have been observed.

Several investigators have recently claimed to have successfully inoculated human cancer to rats and mice, but a long series of prior attempts were apparently unsuccessful, and the more recent ones are open to doubt. In the inoculation from one animal to another of the same species negative results were obtained by numerous investigators, but on the other hand a few positive ones have been arrived at, viz., by Goujon (Epithelioma in guinea-pig), Klencke (Melanotic Carcinoma in the horse), Wehr (Carcinoma in the dog), Hanau (Epithelioma in the rat), Eiselsberg (filio-sarcoma in rat), and Morau (Epithelioma in mice). Hanau's well-known results are very striking.

Quite recently Morau has presented to the Academy of Sciences the following conclusions arrived at in his continued experiments.

- (1). White mouse epithelioma is inoculable from one animal to another of the same species.
- (2). Hereditary influences play a very important part in the development of these tumours.
- (3). Secondary growths are apt to form in various parts of the body, the

development of these metastatic formations being favoured by an injury to the tissues or organs.

(4). Gestation produces the same effect as traumatism.

(5). Certain toxins are produced in the substance of these tumours. They are absorbed into the system giving rise to general cachexia.

(6). These tumours apparently lose their virulence by successive transmission through a series of animals of the same species.

(7). So long as the skin is unbroken these tumours are apparently free from bacteria.

(8). Picric acid seems to exert a favourable influence on these tumours by coagulating the protoplasm of the cells. For this purpose it must be brought directly into contact with the pathogenic cells (interstitial injections).

T. C. F.

A CASE OF MYXŒDEMA CURED BY FEEDING WITH THYROID GLAND (FROM CALVES) TOGETHER WITH A THEORY OF THE PHYSIOLOGICAL FUNCTION OF THIS GLAND. Dr. LUDWIG NIELSEN, of Copenhagen. (*Monatshefte für Prakt. Derm.* Bd. XVI., No. 9.)

In this paper a description is given of a case of myxœdema occurring in a woman 33 years old, with a good previous history. The illness commenced in 1880 with swelling of the eyelids and general debility. These symptoms, having lasted about a month, disappeared spontaneously. In 1881 she suffered from nausea, heaviness in the head, and headache. In the following year she was well again. In 1885 she developed the usual symptoms of myxœdema, beginning with swelling of the gums and face, which disease gradually progressed notwithstanding treatment with iron, arsenic, &c. In October 1892 the thyroid gland treatment was commenced, her condition at this time being the following: the features were coarse, the scalp and neck were swollen, puffed up, and stretched, especially the eyes. Owing to unfavourable symptoms, the treatment was stopped on October 19th and recommenced on November 3rd. About three or four days after the commencement of the treatment the swelling of the skin and mucous membrane of the mouth began to subside. At one time there was a considerable itching of the skin, but without any urticaria. By January 10th—that is, three months after the commencement of the treatment—the general condition of the patient was nearly normal.

Nielsen then proceeds to give a few remarks upon the general literature of the subject of thyroid gland treatment, and discusses some ideas as to the general principles of the physiological action of this organ.

The physiological action of the gland, which is absorbed by the myxœdematous tissues, is naturally quite an enigma, as the normal action of the thyroid is not as yet understood. From its anatomical relations, it is known, that having no excretory duct the secretion must be taken into the blood and thus conducted to all the tissues of the body. Any interruption or want of this secretion produces the various tissue changes symptomatic of myxœdema. These changes consist chiefly in a division of cells and nuclei, and in an infiltration of certain tissues with a gelatinous, partly mucilaginous substance.

If the principal pathological anatomical changes of this disease were really to be attributed to an infiltration of the connective tissues with mucous tissues, as

seems to be Ord's idea, its conditions would resemble on the whole a near relation to the condition of earliest fetal life; the original embryological form of the connective tissues is only mucous tissue, the intercellular substance of which therefore contains mucin, whilst later on it becomes gelatinous by a transformation of the mucous tissue into connective tissue. This transformation takes place rather late; it only commences in the third month of fetal life, as only at this stage the connective tissue fibres begin to develop; but at the same time, according to the anatomical conditions, it appears possible that the thyroid gland may begin to become functional; namely, it consists, according to Kölliker, already in the second month of two thicker lateral lobes with a small isthmus, and towards the end of the same month glandular expansions are formed. Kölliker further emphasizes the very striking richness of tissue of the glands in a somewhat more developed embryo, which was particularly striking in comparison with the thymus and salivary glands. If it is supposed that in myxœdema there is really a question of the development of mucous tissue, the supposition seems to Nielsen acceptable that the secretion of the thyroid gland can be of importance for the formation of the connective tissues in the fetal life as well as later on; that is to say, the physiological duty is to transform, by its influence, the mucous tissue into gelatinous tissue, and that the accumulation of saliva in myxœdema is caused in this way, and the new formation of the connective tissues cannot develop further than the embryonic condition on account of the scanty or entire want of supply of the gland secretion. The chief changes which are found in myxœdema occur in the organ which contains the most connective tissues, that is to say, the skin and the subcutaneous tissues, but also other organs probably, chiefly the vessels, are often affected in this disease by the lesion of the interstitial tissues. The great increase of fatty tissue in this complaint is probably due to a conversion of the mucous tissues which are first formed, into fat tissue. The decrease of the quantity of mucin during the later atrophic stages of the disease might very likely be explained on this theory as a beginning degeneration, a kind of exhaustion of the cells, in a stoppage of the mucous excretion. A factor which must be taken into consideration, according to this theory, in order to obtain a more minute understanding of the development of this disease in the different organisms must be the fact of the development of connective tissues beyond that period at which this development normally occurs. The intermissions of the symptoms naturally would follow a greater and lesser secretion of the gland. It is necessary to suppose that the supply changes after the development of the local destructive process in the gland.

According to Nielsen's theory, myxœdema is supposed to arise from a more or less extensive, partly fetal stage of the connective tissues of the body which arises from a scanty or arrested supply of secretion of the thyroid gland, which secretion being again conducted to the organism, resolves the symptoms by transforming the mucous tissue into normal gelatinous connective tissue.

W. KNOWSLEY SIBLEY.

THE BRITISH JOURNAL OF DERMATOLOGY.

DECEMBER, 1893.

A CASE OF LINEAR ATROPHY OF THE SKIN, WITH HYPERÆSTHESIA OF ADJACENT PARTS.

A SEQUELA OF ENTERIC FEVER.

BY SIR DYCE DUCKWORTH, M.D., LL.D.,

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A. W., æt. 15, a fair-haired Belgian young gentleman, was brought to me on June 7, 1893, for an opinion about the condition of the integuments on various parts of his body. He was a well-nourished, healthy looking youth, and had always enjoyed good health till January in this year, when he had a severe attack of enteric fever at his home in Brussels.

In April, some three months afterwards, he noticed some marks on his left thigh at the outer aspect, and similar ones above each ankle on the outer side of the lower legs. About the same time, he experienced undue sensitiveness in the neighbourhood of these marks, and also over adjacent parts, as on the anterior aspect of the thigh. He was sent to Eastbourne, as well for his health as for educational purposes, but no improvement occurred in the parts thus peculiarly affected.

His general circulation was feeble, and the extremities were rather dusky and unduly cold, the weather being warm. All his internal organs were free from disease.

On examination, I found several stripes of linear atrophy running

across the outer part of the left thigh, mostly parallel. The skin here was thin, very smooth, depressed, and typical of the ordinary condition seen in such cases. The colour was mauve and rather dusky. There were similar parallel stripes in the same direction on the outer side of both lower limbs above the malleolus. There was no history of any previous swelling of the limbs, and none of any raised or lumpy condition of the parts. In addition to these appearances, there was found to be an extraordinary degree of hyperæsthesia of the adjacent integuments, following the distribution of the external and middle cutaneous nerves more especially, so that the lightest impact or friction caused the youth to wince with pain. There was a similar hyperæsthetic condition beside the atrophic lines above the ankles. No scars of herpes were anywhere visible.

The knee-jerks were natural. There was no muscular wasting. Headaches were complained of, but were not improbably due to an unequal condition of the eyes, the vision in the left being very defective, and astigmatic from want of use. (Mr. Bowater Vernon's report.)

This sequela of enteric fever was, I confess, new to me, but I have since learned that similar cases have been noted, and I am indebted to Dr. Colcott Fox (v. his "*Report of the Department of Skin Diseases, Westminster Hospital Reports*, 1888) for kindly giving me references to these, and to Dr. Crocker for knowledge of others. I will enumerate the references I have. Dr. Fox asserts that Plügge was the first to note this sequela. (*Zeitschrift für die Staatsarzneikunde*, Vol. XV., p. 369.) Dr. J. R. Bradshaw, of Liverpool, recorded a case in February 1888 (*Liverpool Med. Chir. Journal*, July 1888, p. 489). No abnormality of sensation occurred in this instance. He quotes Dr. Wilks as the author of the first case, recorded in the *Guy's Hospital Reports* for 1861. Dr. Shepherd, of Montreal, *Journal of Cutaneous and Genito-Urinary Diseases*, February 1891, records an example:—"Atrophia maculosa et striata following typhoid fever." (This author states that Manouvriez and Bouchard have described such cases, also Troisier (*Bull. de la Soc. Méd. des Hôp.*, November 12, 1888)—The striæ were noted as "perfectly sensitive."

Dr. Crocker alludes to cases in the recent second edition of his work on "*Diseases of the Skin*." Some cases were met with in one of the London Workhouse Infirmaries not long since. Numerous references

are to be found also in the second (French) edition of Kaposi's Lectures.

We may assume, therefore, that lineæ atrophicæ may sometimes be met with after enteric fever. It must be a rare sequela. Their occurrence, together with the hyperæsthesia so marked in the above instance, point, I think, to the neuro-trophic nature of the lesion, and indicate that both trophic and sensory branches of nerves may thus give token of the damage wrought upon them by the special toxine of enteric fever.

In Dr. Wilks' case, the lineæ were, as in my patient, tender and sensitive, so that the girl shrank when touched.

The prognosis in any such case is good, but it is not to be expected that the integuments will ever again become natural. The therapeutical indications are to restore the general level of nutrition by good diet, and to employ such remedies as arsenic, iron, and cod liver oil. Warm sea-water baths, or peat baths, may be recommended, and feeble galvanic currents applied for short periods to relieve the hyperæsthesia. The appearance presented by the atrophic stripes is exactly that seen after prolonged distension of the integuments from obesity, lipomata, pregnancy, or chronic dropsy from cardiac or renal disease.

But in these cases the condition arises without any recognizable distension, and is probably due to neuritis involving both sensory fibres and those regulating the nutrition of the affected area.

(The last report of this case, received Nov. 24, 1893, is as follows : " My leg is much better. The colour of the marks has faded, but the pain is felt from time to time."—D.D.)

THREE CASES OF ADENOMA SEBACEUM IN ONE FAMILY.

BY G. G. STOPFORD TAYLOR, M.D.,

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AND

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In the *British Journal of Dermatology*, of January, 1890, there appeared a most complete report by Dr. J. J. Pringle of a case of adenoma sebaceum which had come under his care. In it the writer gives a detailed account of the eruption, its clinical as well as its microscopical appearances, together with a *résumé* of all that was then practically known of the disease. I was hereby enabled to recognize the affection in the person of Elizabeth W., and Dr. Barendt confirmed the diagnosis by a careful microscopic examination. The patient presented herself at the out-door department of the Liverpool Cancer and Skin Hospital in October, 1891, and gave me the following interesting family history.

She stated that her father, *æt.* 50, her brother Frederick, *æt.* 17 (an epileptic), and another brother, George (born an idiot), who died *æt.* 18, all suffered from a similar eruption. On interviewing the father I found that, though a respectable hard-working dock labourer, his intelligence was much below par for his class, and that the lad Frederick was becoming demented.

It appears that the eruption showed itself in all of them at about the same age, viz., between five and six years, that no medical advice had been sought, and it was only because of the disfigurement that the girl applied for treatment.

The following is taken from my note-book :—

E. W., *æt.* 19, a simple sort of creature, though physically strong,

stated that "when she was a child her mother noticed an irregular-shaped patch on the right cheek, situated midway between the lower eyelid and nose: its growth has been very gradual. Some white pimples appeared about the sides of the nose, and these have deepened in colour as age advanced."

Present condition.—The skin of her forehead is somewhat rough, and covered with pale red vascular dilatations. The nose, more especially its sides, the cheeks, extending outwards as far as the malar prominences, are covered with slightly nodular growths of a salmon colour; about the cartilages and the naso-labial furrows the growths are smaller, more circumscribed, and in some instances have become pedunculated, and between the latter there are traces of a dirty, sticky-looking secretion, of a disagreeable odour. The upper lip is free. The chin, more especially the prominence, is also covered more or less completely with similar elevations, some of which are discrete, others more or less ill-defined and confluent. The face, taken as a whole, with the exception of the upper lip, has a very congested look, more especially towards the middle line, while over the malar prominences and the cheeks below, the skin is covered with vascular dilatations; in the parotid region, and below the inferior maxilla, the dilatations become mere freckles. On puncturing a few of the growths no sebaceous material could be satisfactorily expressed. In the centre of some of the growths a distinct aperture is noticeable. On the glabella the nodules are visible, but paler in colour. The eruption itches very much at times.

Fred. W., æt. 17.—*Present condition.*—The same regions are involved, though the disease exists in a comparatively exaggerated condition. In this case also the paleness of the upper lip is in striking contrast with the other regions of the face, which, taken as a whole, is much more vascular than his sister's, though the telangiectases are not so well marked.

W. W., æt. 50.—*Present condition.*—The eruption consists of distinct conical elevations varying from a pin's head to the size of a pea, situated on nose, cheeks, naso-labial furrows, chin, below lobules of both ears and among the whiskers, also on the mucous membrane at entrance of both nostrils: upper lip and moustache-region free.

The growths are generally discrete, but there is a disposition to coalescence. On the nose, and in the naso-labial folds, the nodules

tend to become pedunculated. The whole skin is extremely vascular and weather-beaten.

The water-colour drawings of the above were shown at the Newcastle meeting of the British Medical Association, and excited great interest.

Microscopic Examination.—A pedunculated growth was removed from the father, W. W., one inch below the lobule of the left pinna—an area devoid of hair—and placed in absolute alcohol to harden. Sections were made with the ether-freezing microtome, stained with picro-carmin, and mounted in Farrant's medium.

The section measures $\frac{3}{8}$ in. long, and $\frac{1}{8}$ in. at its greatest breadth; even with the naked eye numerous irregular yellowish-red spots are seen scattered throughout the derma.

Under a low power (Hartnack, tube in, ocular 3, objective 3) these spots are at once recognized by their form and general appearance to be sebaceous glands, or at any rate growths of a similar nature.

Derma.—The reticular layer shows nothing abnormal in its structure; no adipose tissue is discernible. On the other hand the papillary layer is very irregular; some of the papillæ are elongated and branched.

Epidermis.—In consequence of the papillary irregularity, the inter-papillary plugs of the Malpighian layer are thrust to a considerable depth into the derma. There is, however, no attempt at epithelial ingrowth, and the cells are well defined from the subjacent derma. The granular layer is well marked, uniform in depth, and elæidin granules are readily made out under a higher power. The horny layer conforms to the general irregularity produced by the hypertrophic papillæ, and in places between the ridges an accumulation of cell detritus and sebum is apparent.

As regards the glandular structures, bi-, tri-, and even quadri-lobulation can be made out in various sections. Here and there, a duct-like process can be traced up to an infundibular depression of the epidermis (hair-follicle?).

Under a high power (Hartnack, tube in, ocular 3, objective 7) the cells resemble those of a sebaceous gland; the nuclei are distinct, and the protoplasm is finely granular. At the periphery of a lobule, it would appear that active growth is in process, in the centre, the cells are breaking down, and the nuclei are no longer recognizable. Some of these glandular structures are distinctly below the normal

level, and appear as if they were quite isolated in the deeper layers of the derma. It is probable that they are offshoots of a sebaceous gland, and not independent growths. No coil-glands are present in any of the specimens that have been examined.

The name Adenoma Sebaceum is well chosen; for it is a benign growth beginning in a gland, and the adjunct sebaceum marks its nature, both of which points the microscopic evidence completely confirms.

I was pleased to find that the above observations agree in all essential points with those of Dr. Pringle; the more so as I only read his lucid account after I had reported the result of my examination to Dr. Taylor.

In the second edition of his standard work on "Diseases of the Skin," Dr. Crocker gives a succinct account of all we know about this disease. His view of its pathology, viz.: that adenoma sebaceum is of the nature of a congenital overgrowth of the sebaceous glands is confirmed by the above statements. Dr. Crocker has seen eleven such cases. The fact that some psychic disturbance is almost invariably present, is of use in arriving at a diagnosis of the disease. The treatment is unsatisfactory, although surgical measures have improved the disfigurement in certain cases, especially where, as Dr. Crocker says, the papules are few in number.

CLINICAL NOTES.

A CASE OF LYMPHANGIOMA CIRCUMSCRIPTUM CUTIS.

BY ALFRED G. FRANCIS, B.A. (CANTAB.), M.B., B.S. (LOND.), F.R.C.S. ENG.,

Hull.

In the January and February numbers of this Journal I recorded some cases of circumscribed lymphangioma of the skin, with a clinical analysis of those published cases that I had been able to find. Through the kindness of my friend Dr. E. Daly, another case has come under my notice, of which the following is an account:—

A. F., female, aged 11 years, domestic servant.

Family History.—Father died of phthisis, and there is some reason to believe that other relations on the father's side were consumptive: there is no history of nævi.

Previous History.—Patient is of English race, and has never been abroad: she has had no serious illnesses, but has been recently under treatment for anæmia.

History of Present Affection.—The disease was certainly present at the age of seven years, but may have been in existence longer; as far as can be ascertained, there has been no extension of the disease since it was first noticed; it has certainly not extended within the last few years. There was no nævus at birth.

There has been some slight bleeding from the growth, when chafed by the clothing, on several occasions; its situation is such that it is pressed upon by the upper border of the stays.

There have been no attacks of "inflammation"; but the growth is always rather tender, at times more so than others, so that the stays have to be removed: these periods of increased tenderness bear no regular relation to the catamenia.

Present Condition.—Patient is rather anæmic; complexion, dark; hair, black. No other skin affections are present: there is no evidence of visceral disease.

The disease is situated on the lower part of the left mamma and

over the fifth intercostal space and sixth rib immediately below, extending laterally between the anterior axillary and parasternal lines. The long axis of the affected skin is parallel to the intercostal spaces, but the disease is not limited to the area supplied by a single intercostal nerve.

It consists of about thirty distinct growths, varying considerably in size, some being apparently solitary "vesicles," the others of clusters of these; the majority vary from some vesicles just visible to the naked eye to others about the size of small peas; these are clustered around and between the larger growths: about seven are between the size of a threepenny-piece and a sixpence; the two largest are elongated and measure $1-1\frac{1}{2}$ inches long by $\frac{1}{4}-\frac{1}{2}$ inch wide.

The smallest growths are distinctly "vesicular," with thin walls, translucent, and standing out like little pearls on the surface of the skin: the larger ones are less distinctly "vesicular," straw-coloured, and with thickened epithelium (keratosis) over them; their surface is marked out into little irregularly polygonal areas apparently corresponding to the underlying "vesicles."

About eight of the growths, varying from a pin's-head to a threepenny-piece, have little "vascular tufts," which do not disappear on pressure, and small hæmorrhagic dots; the tufts and dots only occur on the growths. There is no evidence of subcutaneous lymphangioma; and no indication of a localized elephantiasis in the form of plaques of thickened skin beneath the growths, or rugose skin between them.

The affection being stationary and unattended by severe subjective symptoms, no treatment was adopted; and thus no opportunity was afforded for microscopical examination.

Remarks.—The case falls into the group *Hæmatolymphangioma*, sub-group c, which sub-group includes most of the recorded cases. The situation is unusual, this being the second case in which the skin over the mamma was affected; in Hutchinson's patient it occurred over the upper part of the right mamma. The history of tubercle is uncommon; in only three cases (including Noyes' second case) has this been noted. The position of the growth in its relation to the unyielding border of the stays is interesting, and suggests that friction may have been a factor of importance in its development or growth; in one of Hutchinson's cases the affection was ascribed to the friction of the boy's braces, and injury seems to bear an important relation to

the progressive development of lymphangioma in the skin and tongue. It is possible that the relation of the distribution to the intercostal nerves is no mere coincidence, a point to which attention was drawn in my former paper. The periodical attacks of tenderness were the only indications of the recurrent inflammatory attacks found in some cases of the disease.

Further Note on Case IV.—I have had several opportunities of examining this patient since the case was recorded : as was then stated, a small isolated growth was not removed at the time of the operation with the rest of the growths ; this has since undergone no increase in size, and there has been no return or extension of the disease during the last two years. Although the little growth at the time of operation was quite free from vascular tufts, yet in January, 1893, there were many tufts scattered over the "vesicles" of the growth ; in May, 1893, these had quite disappeared and are still absent. The appearance and disappearance of vascular tufts was noticed by Crocker* in one of his cases, but in my patient there has been no development of fresh "vesicles" associated with the appearance of tufts as in Crocker's case.

An additional case from Australia has recently been recorded by Noyes.†

The patient was a girl, aged twelve years, whose mother died of phthisis. The disease was situated on the front of the right thigh, just below the groin. It commenced as a "birth-mark," the lymphangioma became evident at the age of 10½ years, and when the patient was seen largely predominated in the growths. There was enlargement of the affected thigh ; this, however, instead of progressing, as in the case of Drs. Tilbury and Colcott Fox, had subsided when the patient was seen two years later. There were no subjective symptoms. The treatment by electrolysis obliterated the vesicles, but large numbers of minute vesicles appeared in the neighbourhood of the obliterated lesions after the operation. This may serve as an additional illustration of the tendency to extension of lymphangioma after injury. This case is thus one of Hæmatolymphangioma, and belongs to sub-group b. It is the second case recorded in Australia, and not the first, as stated by Noyes.

* Crocker, "Diseases of the Skin," 2nd edition, 1893, p. 610.

† Noyes, *British Medical Journal*, vol. i., 1893, p. 1159, with plate.

A CASE OF XANTHOMA TUBEROSUM MULTIPLEX.

BY S. POLLITZER, A.M., M.D.,

New York, U.S.A.

W. H., æt. 31, single, master-carpenter, consulted me two years ago for an affection which had developed about four years before. The patient is a strongly-built, medium-sized man, who has always enjoyed good health except for occasional attacks, during the past ten years, of severe pains located chiefly in the epigastric and right hypochondriac regions, lasting from a few minutes to several hours, but not accompanied nor followed by jaundice. The urine contains nothing abnormal.

In his mother's family there is some history of rheumatism and gout; his maternal great-grand-aunt and uncle are said to have suffered from gout; a grand-aunt now living has rheumatic arthritis.

The affection first appeared on the great toe of the left foot, next on the outer borders of both feet, then on the right hand, and later on the right knee, the elbows, the hips and other regions, and last on the buttocks. The rash attained its present distribution about two years ago and since then has remained unchanged.

On examination the rash is found to consist of tubercles located in the true skin and movable with it, varying from lemon-yellow to the normal colour of the skin, from a mustard-seed to a lentil in size; in most cases they are slightly raised above the level of the surrounding skin. On the feet a few nodules are scattered over the soles; they are more closely aggregated along the outer borders of the feet, and a distinct group surrounds the metatarso-phalangeal joint of the great toes. A few nodules occur over the tendo Achillis about the level of the ankle. They are more numerous on the left than on the right foot, about thirty occurring on the former and fifteen on the latter. A large group consisting of from thirty to fifty nodules on each side is present on the anterior aspect of the knees over and above the patellæ. The entire patch here has a distinct pinkish hue, the yellow nodules standing out in the diffusely reddened skin. On the lower portion of the trunk on the left side above the gluteal region, there is a diffuse group of fifteen or twenty nodules. Here, too, the skin of the affected region has a pink colour, though it is less marked than in the groups on the knees. On the backs of the arms

around and above the olecranon a group of about thirty-five nodules occurs on the right side, about twenty on the left. On the outer side of the left arm above the elbow are two parallel linear groups about one-and-a-half inches long, arranged longitudinally. On the palmar of the right hand over the metacarpus of the thumb there is a group of about twenty-five nodules, which have a distinct annular arrangement. There is a small group on the dorsal surface of the terminal phalanx of the fourth finger of the left hand. The patient complains of considerable pain occasioned by the nodules on the soles after much walking, especially in cold weather. The patches on the palm and on the knees itch considerably at times.

The noteworthy points in this case are a slight tendency to grouping in geometric figures (the parallel streaks on the left arm and the ring on the right palm) and the reddish hue apparent in some of the patches. This latter fact appears to me of special importance in view of the relations between this form of Xanthoma and the disease as it occurs in glycosuria. In a large number of cases of Xanthoma there is a distinct history of hepatic disturbance, especially of jaundice. In this case there was also probably some liver trouble, if we may interpret the attacks of severe epigastric pain referred to as due to biliary colic.

A few nodules were excised from the patch on the elbow, and the diagnosis was confirmed by a microscopical examination. I have sent the sections to my friend, Dr. Török of Buda-Pesth, who will report the result of his examination in a paper on Xanthoma, soon to be published by him.

A CASE OF XANTHOMA DIABETICORUM.

BY S. POLLITZER, A.M., M.D.,

New York, U.S.A.

The following case was shown by Dr. George W. Jacoby at a meeting of the Physicians of the German Hospital and Dispensary in February, 1892. The patient was presented chiefly on account of other interesting features, on which Dr. Jacoby,—to whom I am indebted for notes of the case, and for permission to report the features of special dermatological interest,—will himself report.

L. F., æt. 17, born in the United States. Nothing in family history.

He had enjoyed excellent health, having escaped even the usual diseases of childhood, until his fourteenth year when his mother noticed that he was losing flesh and looking poorly. In May, 1889, he was seized with an epileptic convulsion lasting a few minutes. Three or four months later he had another fit and thereafter during the next three years, ten or twelve attacks in all. In August, 1890, his mother's attention was attracted by his greatly increased thirst and frequency of micturition. The family physician, who was consulted at this time, said the boy had diabetes. Under a suitable diet and bromides, there was decided improvement in his general condition. During the summer of '91 the patient lost nearly all his finger-nails; suppuration occurred around the matrix and the nails fell off; subsequently they grew again. Since January '92, he has complained of a peculiar numbness at the tips of his fingers, and about this time he noticed an eruption on his extremities. An examination at this time showed great emaciation, certain sensory disturbances which need not be farther entered upon here, a large percentage of sugar in the urine, and a small quantity of acetone. Repeated examinations of the urine always showed these features.

The eruption consists of nodules from a millet-seed to a bean in size. They are for the most part of a distinctly yellow shade, though in many places they have the normal colour of the skin. Each nodule is surrounded by a zone of a bright red hue, the red colour encroaching on the sides of the nodule, and limiting the area of the yellow portion, whose full extent may be momentarily made to appear when the skin is blanched by the pressure of the finger. Where the nodules are closely aggregated into patches, the erythematous areas around the nodules coalesce, and the entire region at a little distance has a bright red appearance. On the arms and forearms some of the nodules have developed into large prominent tumours which rise sharply from the surrounding surface in cylindrical masses, from a quarter to half-an-inch or more in height and a quarter of an inch in diameter. Some of them have a mushroom shape, their upper surface being wider than their base. Many of them are excoriated on the top and are covered by a blood-crust. This excoriation is clearly due to injuries depending on the prominence and exposed position of the tumours; none of them show any tendency to breaking-down.

The nodules are distributed as follows. There are a few on the back of the neck and shoulders; on the arms and forearms they are in countless numbers, being most numerous and almost confluent at the elbows, and distributed chiefly on the posterior and outer sides. On the palms of the hands numerous small hard nodules may be felt when the skin is stretched, and these are painful to pressure. On the legs the nodules are more or less scattered over the entire surface, and are densest on the front of the knees and near the hips. From the buttocks to the middle of the back of the thigh they occur in an unbroken sheet. On the soles of the feet deep nodules like those on the palms may be felt.

Unfortunately, it was not possible to obtain a specimen for microscopical examination, but the association of these characteristic nodules with diabetes leaves no room for doubt as to the diagnosis. As to the further history of the patient, I only know that his emaciation increased still more, and that his epileptic attacks became more numerous; and I believe that Dr. Jacoby's extremely unfavourable prognosis *quoad vitam* was soon verified.

Since 1851, when Addison and Gull described the first case of this disease, to the present time, fourteen cases, most of them English, have been reported,* my case making the fifteenth, and the extreme rarity of the affection has led me to publish this report, notwithstanding its many evident deficiencies. Two features in the case strike me as especially worthy of mention: 1. The presence of acetone in the urine: 2. The occurrence of large xanthomatous masses such as have hitherto been described only in a few cases of non-diabetic Xanthoma.

* See *Brit. Journ. of Derm.*, August, 1892, and November, 1893.

REVIEWS.

ON FAVUS.*

THE advent of M. Sabrazès' monograph on favus is opportune at the present time, when the opinions of bacteriologists and dermatologists are divided on the question of the unity or plurality of the species of the parasitic fungi. M. Sabrazès has chosen his subject wisely, for, as an inhabitant of Bordeaux, he is excellently situated to undertake the investigation of favus. The Department of Gironde, of which Bordeaux is one of the chief towns, borders on the Department of Landes, and is only some sixty miles from the Basses Pyrénées, two regions, which thirty years ago showed, according to M. Bergeron, a higher percentage of tinea cases than any other province of France, with the exception of Hérault and Aveyron in the South, and Seine Inférieure and Pas-de-Calais in the North. M. Sabrazès' relation to the medical faculty in Bordeaux, where he holds the position of senior assistant in the clinical laboratory, and his personal connections with M. Dubreuilh have given him rare facilities for elaborating a work on favus.

Yet, after perusal and due reflection on the contents of this monograph, we are bound to admit to a certain sense of disappointment. M. Sabrazès conclusions on the whole we consider sound, and we welcome them as in confirmation of what we ourselves have striven to uphold. It is his method of dealing with the subject that disappoints us. M. Sabrazès has written more than he has experimented, and experimented more than he has thought. It may in a sense be said that he has experimented not wisely, but too much. The pity is that authors like M. Sabrazès, in discussing the parasitic fungi, do not clearly discern what is meant by the *Natural History* of fungi. M. Sabrazès treats us to a summary of forty-one cases of favus

* *Sur le Favus de l'Homme, de la Poule et du Chien.* Par le Dr. J. Sabrazès. (Paris, 9, Steinheil, Librairie-Editeur, 2, Rue Casimir-Delavigne, 1893.)

disease cast in the mould of a hospital record. This is a poor way of portraying the life-history of a fungus. We know of one method only of doing this which can claim to be scientific, and this is the expedient of studying the life and environment of the fungus, and following it through all the evolutions of that life. The sort of knowledge of favus which is profitable to the physician, as well as to the biologist, is a clear and simple account of the life and habits of the fungus, apart from any interference on the part of man. The practice of fungiculture should help us to this end. If it does not, then it is of no use to the practical physician or to sanitary science. If we survey the literature of the last fifteen years on the mycology of the tinea, or mould-fungi, it will all be found to drift in one direction, and M. Sabrazès, who is well acquainted with this literature, has, we think, fallen too much into the same drift of multiplying cultures with the object of describing forms. We have heard so many times what Achorion and Trichophyton look like when cultivated in beef-broth, barley-water, on agar and gelatine plates, coagulated serum, and a score of other soils, that the limits of our patience are being reached. M. Sabrazès requests our attention once more to the old story, but the *ennui* of this endless repetition is lightened by his good sense in recognising the large range of variations which Achorion (and Trichophyton) can exhibit without losing their identity. We welcome this as a good token of M. Sabrazès' future usefulness to the mycology of the parasitic fungi. His opinion that there is but one human favus fungus, will probably not be his final decision. The rashness of some observers in multiplying species has no doubt driven M. Sabrazès to the opposite pole of opinion, but on the grounds of analogy and probabilities it is almost certain, as we think, that *varieties* of Achorion and Trichophyton do exist. But M. Sabrazès does not seem to us yet extricated from the prevailing tendency to search for variations in peculiarities of form. We believe we are right in saying that *permanency* is one of the essential conditions of a species-making variation, and this sort of variation is almost sure to have been acquired in the natural struggle for existence. Any variation from the parent type which becomes permanent in this struggle would certainly be useful. Hence we should try to ascertain what use any supposed variation could be to the fungus in question. We are sure much error will be avoided if observers will but follow this

simple expedient. If they recognise, and recognise they must, when their experience is sufficiently enlarged, that the number of transitory forms assumable by fungi under the artificial conditions of cultivation are infinite, they will cease to portray and describe them with such punctilious exactness. If M. Sabrazès would direct his assiduous researches in the way we have indicated, and would utilise the rich material at his command, with the intention of discovering useful and natural variations in *Achorion*, we might fairly anticipate in the next few years some real advance in our knowledge. One of the readiest means of distinguishing one variety of fungus from another is their adaptation to different degrees of temperature. Thus the different relationship of heat, or temperature, is one of the natural distinctions between *Trichophyton* and *Achorion*, for the favus fungus readily adapts itself to the temperature of man's body, 37-40° C., while the ringworm fungus suffers a morphological change and diminution of its vitality at this temperature. We strongly recommend M. Sabrazès to rear his specimens of *Achorion* under their natural conditions, so far as this is practicable, and to bring the different degrees of temperature to bear on their natural habitat. We have described elsewhere our method of conducting this natural cultivation, and would be glad to see its utility more generally tested.

M. Sabrazès devotes a few pages to the consideration of the contagion and prophylaxis of favus. This is a matter of real importance to the sanitary authorities of those departments in France and Italy where favus is a prevalent disease, and we could have wished the subject more systematically treated than it is here. The question has a significant value for us, for the question of the contagion of favus must embrace also the contagion of ringworm. M. Sabrazès doubts the frequency of the transmission of favus from animals to man, and he rests his opinion on the negative evidence obtained from his forty-one cases. He adduces some valuable evidence to show that it is quite possible for the human favus fungus to pass directly from man to the cat, or to mice, and he admits the possibility of the fungus passing from animals to man, but, in his opinion, this seldom happens. M. Sabrazès' facts lead us to a rather different conclusion. On the ground of his evidence alone we conclude that the host-species of the human favus fungus include man, the dog, the cat, the mouse, and, possibly, the domestic fowl; but on the relation these hold in

regard to man as sources of contagion the forty-one cases throw no light. M. Sabrazès finds difficulty in admitting a saphrophytic pre-parasitic existence of Achorion. But the information with which M. Sabrazès' industry furnishes us is sufficient, we think, to justify our acceptance of this hypothesis as a true one. Favus is a disease of the country where vegetation abounds and where saphrophytes must also abound. The forty-one cases were all of rural origin. Another link in the evidence is furnished by Mr. Sherwell's remarkable narrative, in which we are told that two young ladies, two dogs, and two mice, in the same household, were all attacked by the Achorion fungus. We are tempted to infer that the mice infected the dogs, and the dogs communicated the disease to the young ladies. But what infected the mice? Mice and rats, and possibly all the members of the Muridæ family, are extremely susceptible to the attacks of Achorion, and being gregarious animals, are apt to convey the disease one to another. If the species of Achorion were dependent for the maintenance of its existence on mice and rats, why do we not find more of the disease in rodents inhabiting a favus district? The answer, we believe, lies in the hypothesis that Achorion has its primary source in the vegetable world. It is for some future observer to tell us where the source lies, and how the contagion travels to man.

We congratulate M. Nocard and M. Sabrazès on their success in isolating *Oospora canina*, or the favus-fungus of the dog. We should describe as the most characteristic feature of this fungus its power to vegetate at higher temperatures than those of *achorion vulgaris*. In its malignancy it approaches the *aspergillus fumigatus*, so ably described by Siebenmann.

Spores of the *oospora canina* were injected into the auricular vein of a rabbit; it died, and the autopsy disclosed miliary granulations scattered throughout the lungs. The microscope applied to these granulations revealed a radiating mycelial growth. A critical bacteriologist might, however, refuse to accept this evidence because of M. Sabrazès' omission to recultivate these mycelial growths for the purpose of identifying them with the original culture of *oospora canina*. We have known serious error arise from this omission, and all who are acquainted with the "accommodation controversy" will call to mind the necessity of this recultivation.

But in the case of the oospora canina, the collateral evidence is not against M. Sabrazès' conclusions. And we look upon the capacity for internal vegetation as worthy of being raised to the rank of a species-making difference. It is a useful variation, and confers some advantage on the species in its struggle for existence. Many valuable facts concerning the relation of the oospora canina to the achorion vulgaris are recorded by the author, but for these we must refer the reader to the original memoir.

We cannot help regretting that M. Sabrazès has not given us a more thorough botanical description of the structure of the fungi he has cultivated. The structure and the general plan of development of the parasitic moulds is, at bottom, moulded on the same lines as those of the higher fungi of the Ascomycetes series, and there is an obvious advantage in employing the recognised botanical terms. The term "gemmae," which he proposes to apply to the concatenate dilatations on mycelial filaments is by no means original, and was applied many years ago by De Bary to one of the forms of accessory gonidia, found, under certain conditions, in some of the Muscorini.

If we have dissented from some of the methods and opinions in this memoir, it is not because we are blind to its great value. A work which fairly merits the praise of diligence and care, and which has grown out of years of toilsome research, is one which is not likely to be forgotten, nor can it fail to yield good fruit.

H. LESLIE ROBERTS.

MOULD FUNGI PARASITIC ON MAN.*

THIS thesis is, in the words of the author, offered "as a contribution to aid us forward more by the suggestion of facts than by demonstrated conclusions."

This is an eminently true description of the work, for it positively teems with suggestions, the realization of which would require us to alter our views on certain matters which we have always considered facts. Though chiefly concerning the dermatologist, Dr. Roberts does

* *An Introduction to the Study of the Mould Fungi Parasitic on Man.* By H. Leslie Roberts, M.D., Dermatologist to the Royal Infirmary, Liverpool.

not confine himself to the Flora Dermatologica, but treats also of all the fungi which have been observed, even if only once, as parasitic on man.

The fungi which concern the dermatologist, those particularly which produce ringworm, favus, pityriasis versicolor, are largely dealt with, and it is with some surprise that we learn that the author considers them all as varieties of one type, which have, by a process of natural selection, gradually differentiated themselves.

Natural selection plays a very prominent part throughout the book, references to Darwin and his writings being frequent. The author considers all the parasitic fungi as the descendants of some higher type of fungus which have lost the power of sexual reproduction possessed by their higher ancestors.

This absence of sexual reproduction with the formation of spores is indeed our great difficulty in referring the parasitic fungi to any known type, for the botanical classification depends on the variety and method of reproduction.

With Dr. Roberts' criticism on p. 7, on the misapplication of the word "spore," we cordially agree. The rounded bodies which crowd the hairs in ringworm are merely short joints of mycelium, and though in their power of growth they fulfil, to a certain extent, the function of spores, they are not so in the botanical sense. This is no mere assertion; when the fungus is placed in a poor medium the growth takes place just as it does in the hair, the mycelial element being short and rounded. The ampullæ on the filaments Dr. Roberts regards as stores of nutriment.

In the section on *Special Morphology*, and we deal only with the dermatological fungi, Dr. Roberts describes Species I., *Tricophyton*, which he divides, leaving out unimportant varieties, into *T. capitis vulgaris*, *T. corporis*, *T. nuridis*, a variety he has observed among rodents, and *Microsporon furfur* (which, if its pathogenic powers be described as feeble, is not easily got rid of).

Species II., *Achorion vulgaris*, of which there are several varieties.

To *Erythrasma* Dr. Roberts does not refer at all. While our own view is that its place is rather among the bacteria than the fungi, still many dermatologists consider it a fungus, and Dr. Roberts would have done well in stating his reasons for refusing it a place among the hyphomycetes.

While it is no doubt a truism that the disease is the behaviour of the tissues towards the fungus, and that the growth of the fungus and the reaction of the tissues are two different things, they are two things which must be considered largely together, for surely on the growth of the fungus depends the reaction of the tissues.

Dr. Roberts settles in a word the disputed question as to whether Polynesian ringworm is the same disease as that with which we are familiar in the affirmative. He says that the *trichophyton vulgare* flourishes in Paris, London, and Berlin, while *it very seldom attacks man* in Vienna, Antwerp, or Hamburg, and in the next sentence—in Antwerp *its place is taken* by *achorion*, and in Vienna by *trichophyton corporis*. What does Dr. Roberts make of Edinburgh, where we have both the *trichophyton* and *achorion* constantly present? In his anxiety to push his evolution theory, Dr. Roberts sometimes sacrifices fact, as, for instance, on p. 16, after supposing that the ancestor of the *trichophyton* is a parasite or saprophyte on the higher plants, he says:—Its first host is probably an animal whose temperature is *considerably lower than that of man*, such as the common field, or barn mouse.

Through the cat it then reaches humanity. In the case of the horse and ox, Dr. Roberts seems to waive the question of evolution through a series of hosts, for he thinks they acquire the fungus from straw or rodent dung, where it must be leading a saprophytic existence. Now why it should be necessary for the fungus to pass through some animal whose temperature is considerably below that of man in order to reach him, while it can pass directly from a saprophytic existence to the horse and ox, whose temperature is two or three degrees higher than man, is a mystery.

Then we cannot agree to the bald statement that children are *the* favourite host of the *trichophyton*. The disease is appallingly common in calves—at a mixed sale of young stock from 5 to 10 per cent. will be found affected.

Dr. Roberts gives us a new view of the mode of entrance into the hair.

The fungus, he says, dissolves an aperture into the hair-shaft. It would be interesting to know if it continues to dissolve the hair in its growth, or if, having once got in, it merely grows by pressing aside natural structures.

Dr. Roberts is very reticent about the *microsporon furfur*; in fact

we do not even understand whether he has cultivated the fungus, which is stated to be very difficult.

Of the achorion Dr. Roberts says the resemblances are so great to trichophyton that we may consider them as descended from one common parent. To that, of course, we can all assent, our only difference being in the extent to which we would go back to find that parent. Surely Dr. Roberts does not mean to say that onychomycosis is caused only by the achorion, but that is the statement on p. 20.

Of the formation of the cup-shaped scutulum in favus, Dr. Roberts' explanation is a very likely one. He suggests that the part furthest from the moisture of the skin dries by evaporation. At all events the cup formation takes place in the test-tube, where there is no hair to cause depression of the central part of the follicle.

The line of analogy through which Dr. Roberts conjectures the existence of a saprophytic existence for these fungi is quite fair argument. At present we know of other fungi that the more pathogenic their properties, the less frequently are they found as saprophytes. We cannot, however, go the length of assenting to the statement that domestication produces a subtle chemical change in the system which renders domesticated animals alone liable to these diseases. Even if we were to admit (which we should be sorry to do) that the common mouse is a domesticated animal, the field mouse is not so, and surely the mice which are found in zoological gardens cannot strictly be called in any sense domesticated. We see no reason to suppose that any animal is immune to the infection under suitable conditions, and Dr. Roberts' simple statement does not convince us of the contrary.

Rest and oxygen are, Dr. Roberts says, essential to growth. Yet we have an account of a specimen carried by him in his breast-pocket between Vienna and England, presumably constantly in motion, and at the end of the week there was such activity of the fungus that it had turned from white to black.

As to oxygen too, in his experiment a feeble growth took place in its absence, a result corresponding to our own experience. Neither rest nor oxygen are then *essential*. Moisture undoubtedly is.

While we accept Dr. Roberts' statement that there is no communication between the individual joints of the fungus, and that, therefore, every cell is dependent on itself for nourishment, it is matter for

surprise how the enormous masses of fungus often found within a hair continue to exist.

The chapter on nutrient media is all discussion, quotation and hypothesis, without any definite suggestion as to the most suitable media. With most of the conclusions we of course agree.

In regard to the reaction of the medium, there is a very widespread belief that a slight acidity is an advantage. With this Dr. Roberts does not agree, at least in connection with *trichophyton* and *achorion*.

The chapter on variations opens with a long and very apt quotation from Darwin, who might have had some of our ringworm and favus workers in his mind when he wrote the passage.

There is undoubtedly too great a tendency at present to multiply the number of species of the various fungi, and to impose on each microscopic difference some resonant name. Still, while we admit that "individual spores of the same species of fungus may differ in their affinities for the same soil," the enormous majority of them must develop the same type as their immediate ancestors, the exceptions must be exceptions; and surely the instance of five children in a family whose disease was all derived from the same source, and where five different varieties of the fungus developed, must be a very remarkable exception. No case in any way approaching it has come under our notice.

Dr. Roberts then enters on a severe criticism, in our opinion not unmerited, of the views of Unna and Neebe on favus, and he points out several marked inconsistencies in their observations.

On the laws of variation he refers, first to the nature of the soil, undoubtedly the most important factor, for the growth varies most markedly with the suitability or unsuitability of the soil. The development of the pigment, which may be favoured by certain additions to the soil, is, so far as our knowledge goes, of no practical value, though Darwin is brought in here again to testify to the importance of colour. Dr. Roberts' only evidence of importance is the greater liability of white guinea-pigs than coloured ones, which would support Mr. Morris in his view that fair children are more liable to ringworm than dark ones, a view which was pretty well disposed of by Dr. Crocker.

Temperature, too, has an important effect on the growth and development of the fungus. It affects both the colour and the appear-

ance of the filament markedly; but as to the pathogenity, Dr. Roberts says it has yet to be worked out.

Dr. Roberts frequently brings in evidence the behaviour of the bacteria in support of his theories, but it is at least questionable how far this is justified. Of course we know that the virulence of many bacteria may be altered by treatment, but do they not usually return to their natural qualities again? and he gives us no proof that the virulence of the moulds is in any way affected, except that old cultures are not so virulent as fresh ones.

As to physiological differences in apparently similar fungi, which Dr. Roberts thinks is supported by the fact that two sisters were affected in different degrees by an apparently similar fungus, may the difference not have been in the sisters rather than in any subtle physiological difference in the fungus?

In the concluding chapter Dr. Roberts again, on natural selection, says that the tricopyhtic or hair-destroying fungi are characterized by a peculiarity of nutrition which enables them to dissolve the otherwise insoluble keratin, and that thus they are provided with a means of gaining access to a habitat that suits them, and affords a suitable substratum for existence. What of the pre-parasitic saprophytic stage? How is it that the fungus grows so luxuriantly in a test-tube, where this so-carefully acquired peculiarity of nutrition is of no use.

The truth is, this natural-selection theory is ridden to death, and in the whole book there is nothing to convince us that our old divisions of the fungi are not practically sound. Varieties of each no doubt exist—that is everywhere admitted—and that all fungi have a common ancestor is probably true, an ancestor which may have been flourishing as a saprophyte in the Garden of Eden.

The book bears evidence of an immense amount of careful work, but in his anxiety to avoid any conclusion which he did not feel wholly justified in drawing, Dr. Roberts has gone to the other extreme, and has drawn none. This is, we think, to be regretted, for the enormous experience he must have acquired in the culture of the moulds would have well warranted him in suggesting presumptive conclusions which might have been of great value to other writers on the subject.

NORMAN WALKER.

CURRENT LITERATURE.

ECZEMA SEBORRHOICUM.

DR. GEO. P. ELLIOT (*Journ. Cut. and Gen.-Urin. Dis.*, June, 1898), makes a further contribution to the Histology of Eczema Seborrhoicum, viz., in the investigation of the well-known eruption figured by E. Wilson as Lichen annulatus. The author removed pieces of skin from the back of a young man presenting typical L. annulatus, and fixed them in a bichloride salt solution, in Fleming's solution, and in osmic acid, 1 per cent. The sections disclosed a perivascular round cell infiltration, with increase of the neighbouring fixed cells, in the corium, especially in its papillary and sub-papillary portions; marked changes in the related rete, viz., outwandered cells between the cells of the stratum spinosum, a considerable degree of degeneration of the rete cells with obscuration of their general outline and configuration, and faint staining powers of the nuclei by safranin, mitoses, vacuolation in connection with the nucleus in the basic layers of the rete, and also throughout the entire stratum spinosum and granulosum, and even in places in the stratum corneum. There was a considerable thickening of the stratum corneum which remained adherent in the follicular openings. Sebaceous glands were unchanged and were stained black by osmic acid. Many of the coiled glands, however, either in parts or wholly, were dilated, the lining epithelium absent, the cell contours indistinct, mitoses in some coils; ducts unaltered. There was no trace of fat infiltration in the coiled glands or in the rete or cutis.

These results in the main confirm those of Unna, that the process is an inflammation and not a disorder of secretion, but they differ in regard to the fatty infiltration of the tissues and the origin and pathognomic character of the vacuole formation in the rete. The scales are epidermic in origin, and not derived from imperfectly degenerated sebaceous gland-cells. The inflammation moreover is not a secondary process due to fat decomposition; it is probably parasitic. The affection should be regarded as a clinical phase of that cutaneous disease to which Unna has given the name *Eczema seborrhoicum*.

Dr. Elliot's paper raises many interesting points for discussion. Many dermatologists who still employ the term seborrhœa to this affection quite acknowledge that the name is a bad one, but they have preferred to keep to the old signification for the present rather than adopt a fresh one which fails to satisfy them. Others still find it difficult to divest their minds of the impression that the sebaceous glands are in some way specially implicated. They point to the distribution of the affection, to the excessive quantity of fat present in the scales, and to the apparent starting-point of the eruption in the follicles. Dr. Elliott states that the greasiness is not constant, and, when present, not a primary feature. He states that it is to be included as an eczema because it is a "cutaneous catarrh." Pro-

bably eczema is distinctly a more suitable term than seborrhoea for the affection, but we hold that clinically this phrase of "eczema seborrhoicum" is very distinct from other eczemas. The excentric continous spread of the lesions is quite different from ordinary eczema. We must demur to the statement that the English require a vesicle as the primary lesion for the constitution of an eczema.

T. C. F.

HIDROCYSTOMA.

Dr. A. R. ROBINSON (*J. Cut. and Gen-Urin. Dis.*, August, 1893), contributes a very interesting article upon an affection which has attracted but little attention, we think, in Europe, though it is not very infrequent in New York City. He first studied and described this condition in 1884 (*Amer. Dermat. Assoc.*), and it is briefly referred to in his work on Dermatology. G. T. Jackson, W. A. Jamieson, Rosenthal and Hallopeau have described cases under the term Dysidrosia. All the cases seen by him were in women, except one in a man aged 28 years. It is seen especially on the faces of women in middle and advanced life, who sweat freely upon that part, and who expose it to warm vapour, and hence is not infrequently seen upon the faces of washerwomen, although not confined to them. It is worse in summer, and may disappear in winter. The lesions appear upon the lower part of the forehead, the orbital region, the nose, the cheeks, and often the upper and lower lips and the skin. They are either discrete or situated closely to each other, but it is not usual to find them in any considerable numbers closely crowded together. "The individual lesions appear as tense, clear, shiny vesicles, obtuse, round or ovoid in form, and varying in size from that of a pin head to that of a pea. They are, at first, always deep-seated; that is, their base reaches deep into the corium, but on account of their size they are also usually more or less elevated above the general surface. The smaller ones, especially, bear considerable resemblance to a boiled sago-grain. The larger lesions sometimes have a darkish-blue tint, which is most marked at the periphery." There are no signs of inflammation, only in larger lesions a little circulatory disturbance shown at the periphery. There are no subjective symptoms, or the evil may be accompanied by a slight sensation of tension or smarting. The contents of the vesicles dry up, and the lesion disappears, unless mechanically injured, without rupture, often lasting one, two or several weeks, leaving the part in a normal condition, or followed by a slight temporary pigmentation. In the late stage of evolution the dried up contents sometimes appear whitish, like in milium. If the vesicles are ruptured the contents are found to be always slightly acid and never alkaline.

Repeated histological examination disclosed that the vesicles arise from dilatation of the excretory duct of the sweat glands at some part of its course *within the corium*, and that in these lesions the place of formation was in the lower part of the corium. "That, however, it is not a passive dilatation, as in an ordinary retention cyst, is shown by the marked peculiarity, that whether the cyst be large or small, there is such a rapid proliferation of the epithelium lining the part of the duct affected, that the entire cyst wall is lined by this epithelium." Why the lesions form is not clear. The abnormal condition must, Dr. Robinson thinks, reside primarily in the excretory tube or in the surrounding connective tissue, causing obstruction to the outflow of the sweat. The term *Hidrocystoma* was

chosen because the lesion is a cyst, but not a pure retention cyst, and the affection differs both clinically and histologically from Sudamina.

T. C. F.

PLICA POLONICA; SOME CONSIDERATIONS ON ITS ETIOLOGY AND PATHOLOGY. DR. A. H. OHMANN-DUMESNIL. (*International Medical Magazine*, July, 1893.)

A case of this disease, is described, occurring in a girl of 16, of extremely cleanly habits, and which was apparently caused by taking cold during the menstrual period. The flow ceased at once, the temperature rose, and there were great pains in the joints. Sweating was limited to the chest, and had a peculiar mousy odour. This circumstance, as well as the peculiar distribution, the reporter has observed in all his fifteen cases.

Two days afterwards the temperature fell, and the matting of the hair commenced, the felting being established in about ten days. The right cornea sloughed and the vision of that eye was permanently destroyed.

The plica, when removed, was 10 inches in diameter and 1 inch in thickness, the under portion being much darker than the outer. There was profuse shedding of large seborrhœic scales, but no trace of dirt or pediculi. The individual hairs when passed between the fingers imparted a beaded sensation, but were quite normal in appearance. Under the microscope, however, the hairs, with few exceptions, were found to be altered in one of two ways; (i.) the outline was irregular, and at the nodes the fibres of the shaft were coarse and separated, having a more or less open space, which, in some, is found to have ruptured, and the broken fibrils protrude and interlace with those of other hairs; (ii.) the cortex was normal, but the medulla was broken up into small masses, and, at places, quite deficient.

The author considers it to be an atrophic condition of neurotic origin, and denies the truth of the assertion that it is due to filth, though many cases occur in dirty people.

The histological description and probable causation (tropho-neurotic) are thus found to accord with the conclusions independently arrived at by S. Jarochevski.

H. W. MARETT TINS.

DYSTROPHIE PAPILLAIRE ET PIGMENTAIRE. DR. J. DARIER. (*Annales de Dermatologie et de Syphiligraphie*, Tome IV., No. 7, July 1893, p. 865.)

Two cases are detailed to which M. Darier gives the above name. They are similar to the cases described by MM. Pollitzer and Janovsky under the name *Acanthosis nigricans*. (The International Atlas of rare Skin Diseases. Fasc. IV. 1890.)

Both cases occurred in females suffering from abdominal cancer. The condition is one of deep pigmentation of the skin, brown in colour, but in some places almost black; this is followed by great hypertrophy of the papillæ. It commences insidiously, but may become very generally developed in the course of a few months. The principal seats of election are the neck, especially about the nape, and to a lesser degree the flexures, though it may also occur on the hands, round the umbilicus and around the mucous orifices of the face, as in one of these

cases. A full account of the histological characters is given, and the details differ in some respects in sections from various situations, but in all there is an enormous thickening of the horny layers, and a more moderate increase in the thickness of the malpighian and granular layers, the sweat glands being quite normal.

Attention is drawn to the differential diagnosis between this affection and the bronzing of Addison's disease, ichthyosis, and senile or seborrhœic warts; on the other hand, there are certain points of resemblance between this affection and follicular psorospermosis.

M. Darier concludes by stating his reasons for preferring the name he has adopted to that of *acanthosis nigricans*, to which even *papillomatosis nigricans* would even be preferable.

H. W. MARETT TMS.

CLINICAL STUDY AND ANALYSIS OF 1,000 CASES OF PSORIASIS.

L. DUNCAN BULKLEY, M.A., M.D. (*Maryland Medical Journal*, September 26th and October 4th, 1891.)

THE author finds psoriasis to have occurred in 4·2 per cent. of all his cases, the majority being between the ages of twenty-five and thirty. It is more frequent in males. The youngest case was a female two years of age and the oldest a male of seventy-five. The ages at which the disease first made its appearance are tabulated, the greater number being between twenty and twenty-five, but nearly half the cases commenced before twenty. Two cases are given in which the first appearance was between sixty-five and seventy. Attention is drawn to the fact that while in the period between ten and fifteen the females considerably preponderate, during the next five years the males are greatly in excess, and a possible suggestion is made as to the effect of the later period of puberty in males. He also refers to the various proportions of psoriasis in different localities and in different years in the same locality, and states that it is more prevalent in climates subject to great and trying changes with much moisture, than in warmer climates. With regard to its malarial origin, it is relatively seldom seen in St. Louis, where this element is so widely diffused and manifests itself so actively.

From a study of all these cases the author fails to find any cause or combination of causes, though he recognizes various types occurring in those of scrofulous, gouty, or rheumatic diathesis.

The relative curability, he thinks, depend on the age at which the eruption first appeared, the period of the disease at which treatment is commenced, the treatment adopted, and the faithfulness with which it is persisted in, and he lays stress on diet and hygienic considerations.

The paper is a very full and interesting one, though it can hardly be said to add very much to our present knowledge.

H. W. MARETT TMS.

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